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ORIGINAL LECTURES.

ACUTE CATARRH OF THE MIDDLE EAR.

A Lecture.

BY OREN D. POMEROY, M.D.,

SURGEON TO THE MANHATTAN EYE AND EAR HOSPITAL, N. Y.

LECTURE II.

GENTLEMEN: At our last lecture we finished the consideration of the causes of acute catarrhal inflammation of the middle ear.

Prognosis.—As a rule patients make a good recovery. As has been previously hinted at, there is little tendency to destruction of tissue. If the membrana tympani ruptures, there is usually no loss of substance: only a fissure, which rapidly closes. I have seen such fissures heal in one or two days, although as many weeks may be occupied in repair. The favorable prognosis often turns on the short duration of the disease; for, if it is continued a certain time, changes of a proliferous nature are likely to occur. If the cavity has been completely filled with secretion and there has been great pressure, not relieved by rupture of the membrana tympani or evacuation from the Eustachian tube, the membranes of the round or oval windows may rupture, and labyrinthine complications result. The mastoid cells may be filled with the tympanal secretion, and take on true mastoid cell disease, or the inflammation may go direct to the cells by way of the antrum. Mastoid periostitis is not as likely to occur. The thing to be greatly feared in this disease is the obstinate catarrh of the pharynx, which so frequently accompanies the affection. Especially is this so in cases having struma or tuberculosis, where it sometimes seems impossible to overcome the difficulty. The same is true of many weakly, or at least sensitive, people, whose mucous membranes are constantly irritated by the harshness of the air, in many parts of this country, and the only means of relief seems to be a selection of an atmosphere congenial to the patient. I have seen a patient with pain in the ear, tinnitus, etc., changed to a more congenial atmosphere, when in a single day all the symptoms would disappear.

I infer that while a patient has a catarrh in the neighborhood of the Eustachian tubes, he is always liable to ear complications. One great danger is, that in the frequent relapses, which do not present very noticeable symptoms, the attention of the patient is not sufficiently drawn towards them, and treatment is neglected at a period when great deafness may result. I once had a catarrh patient go into the country for two weeks in midwinter, when he had a slight relapse of his symptoms, which were not treated until his return. The hearing had been fifteen inches for the watch, and it went down to three or four inches, from which I could never raise it.

In consequence of the proliferating changes in the Eustachian tube the latter is less under the control of the tubal muscles, and the patient may complain of crackling in the ears, due to the fact that the tube is frequently forced. Again, there is less of that opening and closing of the tube, which in a normal state maintains exactly the proper amount of air in the tympanum. If the tube be permanently narrowed, on the recurrence of a subsequent catarrh it is more readily closed than it would have been, had it been of normal calibre. This symptom may exhibit itself on very slight changes in the weather. In children, who have an ample Eustachian tube, it is less likely to occur, and may even be a source of safety where there are collections in the ear, which may have no other means of outlet, and which is often ample, thereby possibly preventing grave complications from the effects of confined matter in the tympanum. The altered and often sclerosed condition of the tympanal lining, I have often thought, acted as an exciting cause to future attacks, somewhat as the cicatricial changes in granular conjunctiva predispose to relapses.

The hearing ought to be perfectly restored. If the disease has continued long enough to thicken the tympanal lining, there will be some diminution in the sharpness of the hearing. A more important state is the collapsed membrana tympani. If the latter has remained in this condition for a few weeks only, it may never return to a normal position. It seems as though the membrana tympani, by its collapsed state, had become stretched, so as to increase the superficial area, when a sunken or cup-shaped condition was the more natural. I have seen patients with an abnormally patulous tube and sunken membrana tympani, who could restore the membrane by inflation, with improvement to the hearing, momentarily, but on the first act of swallowing were thrown back to the old condition, the membrane apparently remaining in proper position only when actually pushed outward by the intra-tympanal air-pressure.

From the fact that patients subject to catarrhal otitis often have an ancestry with the same tendency, it points at heredity. I am sure that the catarrhal and the rheumatic diatheses often seem to be a matter of heredity, and these affections are quite sufficient to cause ear trouble. Tinnitus aurium usually disappears, but it is not certain to do so, the catarrh setting in motion a tinnitus which may continue a part or the whole of the time during the remainder of the patient's life.

Treatment.—Although the *hyperæmia* is not as intense as in the suppurative variety, it is still quite decided, in some cases, and results in much pain and throbbing, and a sense of fulness in the ears. From one to three leeches may be applied to the orifice of the meatus, preferably to the posterior face of the tragus. The objection to applying them to the concha is, that they sometimes cause abscesses and erysipelas. There is no question, from my own experience, and from that of many others, that in this location depletion accomplishes much more than when applied elsewhere. After the leech has fallen off, encourage bleeding for one or two hours by bathing with warm water. In properly selected cases, the relief to pain and the feeling of fulness is most extraordinary. In other cases, the pain is aggravated by the leech, a dull, draggy pain being substituted for the former kind of pain. This being the case, I at once give large doses of morphia either hypodermically or otherwise.

It is worthy of remark that where the pain depends on a distended tympanum from inflammatory products, the leech will not relieve. In milder cases warm or hot applications to the ear are very serviceable. The most elegant method is to place warm or hot water into a rubber bag and lay it on the ear. The temperature should be regulated so as to give the patient the greatest relief. Very warm water will sometimes aggravate, so will too cool water. Latterly, it has been the prac-

tice of some to use cold or iced water. I can imagine it to do good in some cases of very excessive inflammation, of the sthenic variety, but I am, on the whole, timid about recommending cold to the ear. If it relieves the pain and throbbing and there is not directly afterwards a violent accession of inflammation, it is likely to be successful. We may be superstitious about the action of cold on the ear. Common salt heated and placed in a bag is a good application to the ear, or any dry agent susceptible of retaining heat is serviceable. A bottle of hot water wrapped in a napkin, with the ear laid against it, is an inexpensive and easily applied method.

Moist applications, from their macerating tendency, should be objected to, unless used for only a limited period. Even a hot flaxseed poultice may be applied for a brief period. The old-fashioned mode of applying the core of a roasted onion by its conical extremity to the meatus, may properly be recommended. A better plan for moist applications, is the direct use of warm water to the meatus; fill the latter with warm water, turn the head to the opposite side and let it remain for half an hour. A better plan still is to allow warm water to run into the ear from Clark's aural douche. This may be continued twenty or thirty minutes at a time, desisting when it relieves, or no longer feels pleasant to the patient. This method is very highly thought of by many surgeons of the best standing. I, on the whole, prefer the method of dry warmth. If the ear is excessively soaked with moist applications, it becomes at last very painful. Vapor of water gently blown into the ear often affords relief.

Sometimes chloroform vapor does well. Dr. Theobald, of Baltimore, instils a four grain solution of atropia into the meatus, even in children, to relieve pain. Any dilatation of the pupil will give warning if poisonous symptoms are likely to result. Magendie's solution of morphia may be used in the same manner. In young children a small pinch of black pepper wrapped in cotton will often relieve pain. It will be well for an adult to apply it to his own ear, and, if it burns excessively, diminish the amount of pepper or wrap it more deeply in the cotton,

Where there is a *collection* in the tympanum, the indication is to evacuate it. I do not always wait until the membrane bulges before I puncture. There are other signs of collection in the tympanum, besides this, which justify puncture and which have been already referred to. The operation is not specially painful; nay, it may be done without pain at all, in some instances. An instrument that the ophthalmic surgeon calls a broad needle with an extra long shank may be selected. Use a speculum which is large enough, on trial, for the needle to operate in, then with the forehead mirror carefully illuminate. Pass the instrument, held very lightly in the fingers, down close to the membrana tympani, for there is sometimes danger of pricking the canal. The puncture may be made at the protrusion, but if there is none, then select the posterior superior portion of the membrana tympani, for there will be the greatest depth to the tympanum. In children, owing to the excessive obliquity of the membrana tympani, the puncture may be directed upward, so as not to allow the point of the instrument to glance off from the membrane. While the instrument is in the act of puncturing, the tactile sensibility should be appealed to, and the surgeon should feel when his needle has punctured the membrane. In any event it is best to touch the inner wall of the tympanum—touch bottom, so to speak. Do not place the patient against a solid substance, lest he move his head towards the operator, and do himself harm. I do not usually use ether in this operation, but with many the anæsthetic is the favorite method. I never operate as well with the patient in a prone position: one seems to be out of his reckoning—the relations are not natural. I believe a quick, delicate, and gentle thrust is the best method.

If the operation takes on the form of a somewhat lengthy incision, then a knife like Gruber's, with a handle affixed at an angle, is the best plan, for every step of the operation may then carefully be observed. It is proper to state, however, that an instrument of this kind is much more diffiult to operate with than the straight one. If after the puncture, no fluid is evacuated, then perform Politzer's inflation, and the sero-mucus may be seen to flow out. If the head is turned towards the affected ear, then the whole of the tympanum may be emptied. The inflation should be repeated until the perforation whistle is elicited. The paracentesis may be repeated as often as the tympanum refills, or by a strong inflation the puncture may be reopened, or, if this does not succeed, pass in a No. 1 Bowman probe. This operation, not only relieves pain in a most wonderful manner, but has an equally astonishing effect on the hearing. I remember a case where I suspected an accumulation in the tympanum, with a collapsed membrana tympani, and I punctured and evacuated not more than two drops of serum, with a very great improvement to the hearing.

The profession are indebted to Prof. Schwartze, of Halle, for this operation of paracentesis, which has contributed so much to our surgical resources.

Another condition of great importance and requiring attention is the *collapsed membrana tympani*, consequent on the closure of the Eustachian tube. It has already been seen that this is sufficient to cause considerable pain to the patient and often needs prompt attention. At the outset, I am inclined not to inflate if there is considerable hyperæmia, as it sometimes adds greatly to the patient's suffering; but after a day or two it certainly would be proper to make the attempt, but let it be done gently. At first it may occasion sharp pain, but usually it gives great relief. Do it by Politzer's method rather than by the catheter, as the latter may irritate or lacerate the inflamed throat and do mischief. The rule, then, is inflate very gently at first, and if it acts well continue it, and if there is too much pain, desist. The inflation should be done sufficiently to elevate the hearing to the highest attainable point. If this point is passed, and the hearing diminished, and tinnitus and pain result, then direct the patient to hold his nose and swallow several times; this will empty the tympanum of excess of air, and again restore the hearing, provided the tube is not too swollen to open upon muscular contraction. The latter not being the case, air will be confined in the tympanum, and may for a while aggravate the symptoms.

This is one of the objectionable features of inflation. It is a good rule to do nothing to the patient which may occasion any throbbing or pain in the ear. Manipulations which are not altogether gentle, or even the mildest syringing may do harm by adding to the existing hyperæmia. Even the leeching must be done by a careful hand, for rough manipulations have before now caused a return of the pain, which the leech had relieved.

The inflation for the restoration of the collapsed drum-head is only a temporary measure, and the *tubal catarrh*, which is the cause of the trouble, should be treated. Sometimes a case may be so mild, and show no symptoms of disease except in the Eustachian tube, that the diagnosis of tubal catarrh may very properly be made. This condition may be met in the following manner: simple salt and water warmed, and of the strength of a drachm to the pint, may in mild cases suffice. Throw it behind the velum by means of a spray-producer or the posterior nasal syringe. I prefer the one devised by myself, which has a tip separated from the

syringe by a rubber tube. I use my own hard-rubber spray instrument; any other may be used; the glass instruments are the best, but they often break. Do not throw up more than half an ounce or an ounce of the salt and water, and do it very gently, instructing the patient to remove it at once by expectoration. The atropia-dropper may be used for this purpose, the fluid being thrown into the anterior nares; but in all these applications do not allow the patient to be frightened or agitated, for he may cough, sneeze, or swallow, so as to allow the fluid to enter the tympanum.

Some years since, in Vienna, I saw Dr. Adam Politzer using for this purpose a little earthenware vessel having a nozzle which fitted the nostril, similar to our sick-feeder, which he used by pouring the fluid into the throat. When this medication is insufficient, chlorate of potash in saturated solution may be used, or carbolic acid, one drachm to the pint of water. It may be necessary to give the patient general treatment for naso-pharyngeal catarrh.

Where more energetic measures are needed, I employ the nitrate of silver. It may be used with the posterior nasal syringe or spray instrument, the Eustachian catheter, or my own faucial catheter. The strength may be from a few grains to the ounce, to a one-hundred grain solution. When a drop or two is used by either of the catheters, or with the spray instrument, a much stronger solution will be borne. In using the posterior nasal syringe it is a good plan to draw up five or ten drops of a ten or twenty-grain solution, and force it in strongly enough to cause a coarse spray to be produced. If much pain results, throw in two or three drachms of salt water, which frequently, but not always, gives surprising relief. If the solution has been too strong, the tube may swell, and for two or three days become somewhat impervious. If a prolonged soreness is left in the throat, the remedy has been too strong. There ought to be a feeling of relief from the application after a few minutes or an hour or two. Tincture of iodine may sometimes be used, but only one to three or four drops should be thrown up at a time. It may be diluted with alcohol if necessary; it is sometimes painful. Chloride of zinc acts somewhat like nitrate of silver, but it is occasionally a harsh remedy. Many other astringents may be used, being careful to reject any that act badly. It is not possible to determine beforehand which remedy will be the most beneficial. Often sore and painful tracts of redness, with pain on deglutition, may be observed. The best plan is to touch these with a twenty to forty-grain solution of nitrate of silver, using cotton on a holder for the purpose. Although it is a harsh remedy, I know of nothing which will so soon abolish the pain and inflammation.

Often at the outset of an acute catarrh with pain in one side of the throat which shows a tendency to travel up the Eustachian tube to the ear, the whole process may be arrested at once. A patient was treated by mild remedies without effect. On returning home after one of these applications, the pain was aggravated; it could be followed up the Eustachian tube to the tympanum; the latter began to throb painfully, and in desperation I poured a freshly made forty-grain solution of nitrate of silver into a hard-rubber spray instrument, and threw up a decided spray for two or three seconds behind the velum, pointing it towards the Eustachian tube. It caused considerable pain for fifteen or twenty minutes, but the symptoms wholly disappeared, and no further treatment was necessary. A somewhat threatening attack was evidently wholly aborted.

I am aware that nitrate of silver often acts injuriously, exciting severe pain, and causing much soreness of the parts, which may remain for days or weeks afterwards. The question is to select the cases in which it is likely to act favorably. The above indication of *pain and localized soreness* I believe to be favorable to the remedial action of nitrate of silver. I have in some instances, applied a strong solution of the arg. nit. to a painful and hot locality in the upper part of the pharynx, the result of inflammation, where it produced no pain whatever, but actually felt cool and afforded the most grateful relief. The principal trouble seems to be that the patient does not in some cases appear to react successfully from the application. Sometimes steam injected against the mouth of the tube, and often into the tympanum, acts well in reducing the engorgement of the Eustachian tube. The hard-rubber catheter should be used for this purpose, as the metallic instrument becomes too much heated; it requires to be fixed in position by the catheter holder; I believe my own instrument is a sufficiently good one for the purpose. Do not prolong the sitting beyond four or five minutes, giving a few puffs, and then waiting a half minute, and then repeat. The first effect will be to congest the lining of the tube, but subsequently the hyperæmia will be diminished. I would not make applications to the throat oftener than once in two days, unless it be some remedy of the milder variety, like carbolic acid, a drachm to the pint; this may be used, perhaps a little diluted, in the upper pharynx with a Davidson spray instrument by the patient himself, two or three times a day, but avoid any unpleasant irritation of the part.

Prophylaxis.—Inasmuch as this disease depends largely upon the habits of the patient, and climatic influences, much may be done to prevent recurring attacks. Everything that tends to excite a "cold" should be scrupulously avoided. It takes years of experience to live wisely in this respect; it is only those who become somewhat venerable in years, who may be seen carrying an umbrella almost habitually, with an overcoat on the arm or actually wearing it, and with properly shod feet, who regulate the temperature of the body as carefully as a chemist does a mixture which must be kept at a given temperature to ensure the success of an experiment. Patients subject to aural catarrh become surprisingly sensitive to any lowering of the temperature. I have known patients to observe the direction of a draft, by a pain, or an unpleasant feeling in the ear, when no other signs of its presence existed. They seem to be as sensitive to atmospheric changes as an habitually rheumatic patient, and it is scarcely possible to make the statement stronger. Riding in the wind is often extremely pernicious, and the patient should have the ears protected by cotton-wool in the meati or some other mode of protection. Wet or damp feet or damp clothing must be avoided, or on returning from a ride or walk, everything damp should be removed and dry clothes substituted. The action of peculiar atmospheres has already been hinted at.

I believe *nothing* exerts so strong an influence on the well-being of a catarrhal patient as congenial air. It would seem almost as important as in the case of an asthmatic patient. If one remains in an atmosphere which constantly congests the lining of his pharynx and Eustachian tubes, it is well-nigh impossible for him to do well, but he is likely to go on adding to his deafness by successive attacks, until great hardness of hearing may result. Another important indication is to cultivate as vigorous a state of the general health as is possible, thus enabling the patient to resist the ill effects of our climate.

I do not believe in avoiding the out-door air to prevent taking cold. I have noticed that our stage-drivers rarely suffer from catarrhal affections, notwithstanding they are on their boxes driving sixteen or eighteen hours a day, and exposed to all weathers. Their vigorous physiques resist the catarrhal influences, and this

state has been brought about by constantly being in the open air. Careful regulation of all the habits, is a more important matter than is usually supposed.

Tuberculous or strumous patients may require, in addition to a nourishing diet, stimulants and cod-liver oil, the latter in some form of emulsion. Excessive fatigue or exhaustion should be avoided, as diminishing the power of the constitution to resist the effects of cold. I know a gentleman who will never admit that he has overworked or become exhausted, but he suffers frequently from "a cold" which seems always to attack him in times of depression. Even in mid-summer the inclement atmosphere follows us. I have observed those who go into the country suffer especially. The mid-days are excessively warm, but the evenings often are cold, the temperature after sundown going down very suddenly, and blankets may be in requisition.

It is advisable to direct the patient to always breathe through the nostrils when possible. One of the best plans for keeping the nostrils free is to constantly breathe through them, besides the favorable influence of a current of air passing across the faucial orifices of the Eustachian tubes. This matter will be developed more fully under the head of naso-pharyngeal catarrh, etc. If the mouth only is used in breathing, air is insufficiently warmed, and it irritates the pharynx. Sometimes I advise a respirator to be worn over the mouth, so that the air may be rendered less irritating to the throat. From what has been said, I hope you are impressed with the idea that it is almost a fine art to protect the system properly from our variable and inclement atmosphere.

Constitutional treatment has already been hinted at in the previous topic. To those who accuse us of treating disease locally and depending on it, I would say that I am most heartily in favor of doing anything that benefits the patient. Some of our therapeutic friends will tell us that a large dose of quinia acts favorably in a commencing sore throat, may break it up in short. Tr. aconit. rad. is also given for the same purpose. Others take pleasure in breaking up threatening symptoms by a large dose of Spts. vin. gal., or something of the kind. In the outset of an attack it may be broken up by somewhat prolonged and excessive perspiration in bed, with or without a cathartic dose. A warm foot-bath is a very harmless and effective mode of inducing perspiration, or bottles of hot water may be placed at the feet and sides of the patient to accomplish the same purpose. If there be no undue obstruction in the bowels, a large dose of morphia may suddenly avert the disease. A full dose of Tr. of guaiac may sometimes be very serviceable.

ORIGINAL ARTICLES.

SOME OPEN QUESTIONS IN MEDICINE,

WITH A RUNNING COMMENTARY ON THE NATURE AND TREATMENT OF DIPHTHERIA.

BY RICHARD McSHERRY, M.D.,

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE IN THE UNIVERSITY OF MARYLAND.

Is it not strange that nearly every apparently simple question in medicine may become a *crux* to the medical investigator, so that unless he has that docility of mind which will accept the *ipse dixit* of a master, whom he follows and is willing to swear by (*in verba magistri jurare*), he is fain to content himself with the aphorism that "there is a great deal to be said on both sides of the question?" What is diphtheria? Is diphtheria croup, and is croup diphtheria? Call the ayes and nays, and the vote seems to be about equal, and it rests with the caller himself to give for his own satisfaction the casting vote.

Is the malignant disease which we commonly call cancer, a constitutional disease with local developments, or a local disease primarily, affecting the whole system secondarily? Again, the votes by the sound are about equal.

Is bloodletting a proper remedy in acute inflammation? Aye and nay come down upon us from remote ages. In the face of an appalling opposition I believe bloodletting to be the most potent, if not the safest, of antiphlogistics. Like all potent remedies, making prompt and decided impression, it is, when in fashion, liable to great abuse. Dr. Sangrado is a good caricature of the abuse of the agent when "blood-him," was the fashion, but, nevertheless, *abusus non tollit usum*, and bloodletting is a remedy now too much neglected. I could give "modern instances" from my own practice of its usefulness if there is any rational means of judging of cause and effect in medicine. I was pleased to find some time ago in conversation with my distinguished friend, Prof. S. D. Gross, that he has ever held to the same views and practice.

While touching upon this subject, I may mention an interesting reminiscence in regard to bloodletting in pneumonia. I have always taught in my lectures that some cases, in conditions at the time expressed, *demand* bloodletting, local or general.

During the late unhappy war, the views of Todd and Hughes Bennett were exerting a mighty influence, and bloodletting was quite discredited, except that effected by the sword and other implements of war.

I abhorred this method, while measurably respecting the surgical. It happened that among our pupils were two very intelligent medical cadets then serving in army general hospitals near the city. When examining these young men for degrees, I took occasion to examine on pneumonia, and questioned both in regard to what they had read and what they had seen. We will call them Mr. M. and Mr. K. They were both attached to very large hospitals, and had seen great varieties of injuries and diseases. Mr. M. had seen a great many cases of pneumonia. What was the treatment? *Ans.* Generally stimulating.—What was the result? *Ans.* The mortality was large.—How large, fifty *per cent.*, more or less, of the patients? *Ans.* Much more.—My expression must have been one of surprise, for the candidate immediately added: "Professor, a great many of the cases come into the hospital far advanced in the disease, and some actually moribund." I then said that stimulation was probably the best your surgeons could do for them, but had any of these men any marks about them to show general or local abstraction of blood? *Ans.* They had not.

When Mr. K. came up, I took him over the same ground. He had seen a great many cases of pneumonia in hospital about one half of which proved fatal. The treatment was stimulating, *à la* Todd. Were any bled before or after coming under your observation? *Ans.* They were not: I never saw a man bled in my life.

Mr. K. (now Dr. J. H. Kidder, U. S. N.) after passing a brilliant examination before the navy board, called to pay me a friendly visit. I referred to his hospital experience, and asked how the surgeons explained the large mortality in pneumonia? His answer was that they supposed the lost cases had not been sufficiently stimulated. And I remember, said I, my young friend, when it would have been said the men died because not sufficiently depleted in the early stages.

I mentioned these same facts some time after their occurrence to a practitioner in this city who had been employed as a civil surgeon in one of the hospitals in question. The gentleman said that he remembered distinctly two cases of recovery, both of which had been freely cupped!

Are not such facts worthy of note, *per contra*, as offsets to the statements of Bennett and Todd, that when pneumonia proved fatal, it was rather due to the treatment (by bloodletting) than to the disease?

Drs. Bennett and Todd were both very able men, as able as any in our profession, but they were as liable to mistakes as the rest of us. *Requiescat in pace.*

To come back to diphtheria, with its vexed questions, its identity with croup as Morell Mackenzie *et al.* contend, and as Niemeyer *et al.* deny. Thus Mackenzie says:

"The ordinary inflammation of mucous membranes is attended with engorgement of the tissues and the formation of pus on the surface; under the influence, however, of a certain poisonous contagium, the inflammation, instead of being attended with the formation of pus, leads to the exudation of layers of lymph which become adherent to the free surface of the mucous membrane. This disease is called diphtheria, and whether the lymph is deposited on the mucous membrane of the pharynx, or larynx, or trachea, or bronchial tubes, or any other mucous membrane, or on a wounded surface, the disease is still 'diphtheria.' To suppose that there are two kinds of pellicular inflammation of the larynx, one of which is the cause of the diphtheritic poison, and the other in which the cause is some other undiscovered influence, is totally opposed to all probabilities."—*Diphtheria, its Nature and Treatment*, by Morell Mackenzie, M.D.

Among the points of distinction usually made by those who deny the identity of croup and diphtheria, two very prominent ones are thus met by this author:

1. Albuminuria is assumed to be distinctive of diphtheria. But, says Mackenzie, albuminuria is often present in croup.

2. The cervical glands are affected in diphtheria, but not, or rarely, in croup. The reply to this is: "the cervical glands are not often affected in croup, because the mucous membrane of the larynx has no communication with the superficial cervical glands; on the other hand, as stated above, there is an elaborate connection between the pharynx and the lymphatic glands."

Developments of disease often deviate from the course laid down for them in the text-books. I have just ceased attendance upon a most alarming case of diphtheria, or diphtheritic croup, in consultation with Drs. Jenkins and O'Donovan, in which there was abundant development of diphtheritic membrane upon tonsils, pharynx, and posterior part of uvula, giving a border to the anterior edges, in which we could detect no enlargement of any of the cervical glands. I will recur to this case when speaking of treatment.

Niemeyer expresses himself thus:

"The diphtheritic pseudo-membranes, or sloughs, result from superficial gangrene of the mucous membrane, which again depends on compression of its nutrient vessels by an interstitial fibrinous exudation, or from swelling of the tissue elements, which are filled with a cloudy substance. If the larynx and trachea participate in the disease, the croupous, not the diphtheritic, form of inflammation of the mucous membrane occurs; that is, the surface of the mucous membrane is covered with a more or less tough and consistent false membrane, which may readily be removed, and leaves no loss of substance after its removal. This circumstance has induced some physicians to identify primary genuine croup, which is due to catching cold, etc., with croupous laryngitis caused by infection with diphtheritic contagion. I consider this a false view. The division of diseases, according to the pathologico-anatomical changes they induce, is only a make-shift. In all cases where, as in genuine and diphtheritic croup, we find that the anatomically similar diseases of nutrition depend on very different causes, we should consider them as distinct."—Niemeyer's *Practical Medicine.*

I have quoted these two authors as good observers, and as representative men of opposite opinions, who respectively agree and disagree with all the eminent writers on the same subject.

Are such discussions merely about words? Is it not certain that some cases would be considered typical of diphtheria, and others typical of croup? If this last word has any definite meaning, no one would apply it to a deposit about the fauces, with fever and prostration, provided there were no invasion of the larynx, no marked change of sound in voice, cough or respiration. And perhaps no one would call an attack by any other name than croup, if the initial symptoms were strictly laryngeal or tracheal.

How far may contagion or infection be taken as causative agency to distinguish between diphtheria and croup? Is there any difference in this respect? Croup has not usually been considered infectious or contagious; diphtheria is considered to be notably so. "An acute specific disease, both epidemic and contagious, characterized by a special inflammation of the mucous membrane," etc., says Dr. Squire, in his definition of the disease, while he makes no reference to contagion or infection when speaking of croup.—Reynolds' *System of Medicine.*

This ought to settle the question, but we all see cases of diphtheria where little or no care is taken to prevent its spread, without any extension whatever. I have attended a great many cases where mothers and nurses seemed utterly indifferent to risks, notwithstanding these being plainly presented to them; yet I have seen very few instances of obvious contagion. I certainly admit risks, contagion, and infection. In one family of three children, all affected one after another, there had been free kissing and caressing before I was called in. Professor Frick, of the University of Maryland, early distin-

guished, and of brilliant promise, fell a victim to a tracheotomy operation and the use of a blow-pipe passing from his mouth to the trachea of a diphtheritic child in the hospital.

Notwithstanding such positive facts, the negative facts stand out that, in a vast number of instances, an isolated case occurs in a family without any extension whatever, and where little pains are taken, if any, to prevent extension. Withal, however, the physician is very culpable who does not insist upon precautions. They may save life; they can do no harm.

Supposing diphtheria to be assuredly contagious, what is the contagious matter? Is it living or dead, animal or vegetable? Here is another field for discussion, and discussion develops the reasoning faculties of the profession, always becomingly active, for do we not know

> "That none but a clever dialectitian
> Can hope to become a great physician.
> That has been settled long ago."

The contagion is probably carried in the vitiated secretions, and more probably in living germs lodging therein. Does the morbid poison affect the mucous membrane, let us say of the fauces, and thence the blood, or does it enter the blood first, and then make its impression on the mucous membrane secondarily? Are the low organisms found, always, perhaps, upon careful examination, in the false membrane, in the blood, and the various tissues and organs, to be reckoned as cause or result? Are not the same low organisms, always or usually floating about us, like the moats in the sunbeam, and do they produce the obvious diseases, or do they flourish because diseased blood or tissue is only unable to resist them? A poor old drunken pauper was found helpless in a field the other day, who was attacked by turkey-buzzards, and they would have devoured him, because he was not capable of resistance, had not some neighboring good Samaritans rescued him from their clutches. The buzzards did not cause him to be old and cadaverous, but finding him so, they would have picked the flesh from his bones in short order, according to their instinct, if they had not been driven away.

It is certain, or seems to be certain (a poet, by the license of his craft, goes so far as to say,

"The first and last word in life's volume is doubt"),

that low organisms are deeply and essentially involved in the pathology of diphtheria. Positive evidence comes from a great many sources, and outweighs negative evidence.

While writing this paper a very interesting article falls under my notice in the columns of THE MEDICAL NEWS, from the pen of Dr. John M. Keating, entitled "The Presence of Micrococcus in the Blood of Malignant Measles; its Importance in Treatment."

After all, treatment, therapeutics, is the paramount business of the American physician, and perhaps not only in malignant measles, but in a great many other malignant diseases, the most important element in successful treatment is the destruction of those ravenous parasites known by the various names of micrococci, bacteria, etc. I have long been of this opinion, and have acted upon it with considerable success.

Dr. Keating (and Dr. Formad) found in malignant measles that micrococci (sphero-bacteria) were, as it were, devouring the blood, especially the white corpuscles, of the patients. For a time there was very considerable mortality among the children, and the presence of the bacteria led to the question as to Dr. Formad's experience of the means of checking the development of micrococci in his culture solutions. He said that alcohol was the most potent agent. I may refer the reader, for the beneficial change effected, to the original article, where the patients were liberally dosed with whisky.

Let me reproduce some brief passages from Dr. Keating's paper:

"We may look at present upon the micrococcus as associated with the malignant symptoms of all complications known as 'blood poisoning.' It is found in erysipelas, in puerperal septicæmia, in diphtheria, and in malignant measles. Experience has also taught us that alcohol, the vegetable acids, calomel, or corrosive sublimate, are the drugs *per se* in septicæmia.

"The action of alcohol and calomel is too well authenticated in puerperal septicæmia to doubt their efficacy.

"We know of late how surprising a result will often attend the use of alcohol and *corrosive sublimate* in malignant diphtheria, and also the value of vegetable acids, especially lemon juice and claret, in this dreaded disease."—MEDICAL NEWS, July, 1882.

This all goes to show that if we protect the blood from the ravages of the micrococci, we render something of the same kind of service that the neighbors did to the old man when they rescued him from the buzzards.

Dr. Keating says we know "of late of the value of corrosive sublimate in the cure of diphtheria." I have used this agent habitually for many years, and can add my testimony to the facts recently adduced.

My friend and colleague, Prof. Chew, of the University of Maryland, after speaking of this subject, was kind enough to send me recently a copy of Prof. Pepper's "Address on Medicine," wherein he relates a case, now famous, where, acting upon information given by Dr. G. A. Linn, Dr. Yarrow and himself carried a child safely through a desperate condition of diphtheritic croup, principally by the therapeutic agency of corrosive sublimate. I read this with great interest and satisfaction. It was to me confirmation of my own teaching and practice for years.

It is strange how such an important agent should have dropped out of sight. In the Index of Therapeutics, Stillé and Maisch (1879), no mention is made of mercury under the head of diphtheria; and none in Bartholow's Materia Medica (1878).

In the work of Meigs and Pepper, on Diseases of Children (1870), we find the following passage:

"Regarding diphtheria as a constitutional affection, depending upon a peculiar alteration of the blood, we must admit that we are in possession of no remedy which in any respect merits the name of a specific in its treatment.

"Among the best internal remedies, however, are the

various preparations of chlorine, iron and bark, which may be given singly, or, preferably, in combination."

Here is no mention of mercury, but in the chapter on the allied (identical?) disease called *croup*, mercury does not pass without mention.

"Since the publication of the last edition of this work, our increased dislike of the administration of mercury to children, in large and frequently-repeated doses, and the constant observations that even its free use does not appear to arrest the course of true croup, have led us to abandon entirely its employment in this disease."

True croup is so intractable to treatment that one scarcely knows in what remedies to trust; but I may observe here, *en passant*, that several of the best practitioners known to me trust more to calomel than to any other one remedial agent.

Perhaps Dr. Pepper may be led to reconsider his expressed opinion, since he finds mercury so important in the cure of diphtheria.

By the way, it may not be amiss to offer here an illustration showing the force of some of Dr. Pepper's arguments in relation to mucous catarrhs of a local character, without any connection with blood poisoning.

Dr. Lamousin reports a case "*Du croup par cause externe*," wherein a healthy child of four years of age had a violent attack of diphtheritic croup from swallowing, *de travers*, a kidney-bean. The disease was so typical that the doctor discredited the story of the bean as told by the parents. But the foreign body really entered the larynx and developed the croup.

"Il ne s'agit pas, en effet, d'accident, simulant plus on moins la laryngite diphtheritique, mais bien de cette maladie elle-même, avec son cortége de symptomes, notamment le plus caracteristique de tous: l'expulsion d'une fausse membrane tubuleuse."

False membrane was thrown off pretty freely for several days, under the use of antimony, in masses and fragments. Some of the membrane was, "très-résistante, tubuleuse dans une partie de son étendue; sur sa face externe se voient de petits tractus rouge vif comme des rudiments de vaisseaux sanguins."

The case was, indeed, altogether characteristic; in a few days, something was heard like a valve or piston working up and down in a pump, and thereafter a half bean was ejected enveloped in bloody mucus. The cure was then immediate. There was at the time no prevalence, indeed, no case, of diphtheria anywhere in the community.—*Annuaire de Médecine, etc.*, 1865.

As to the treatment of diphtheria, I must say, that upon theoretic grounds, confirmed by practical experience, I give the *first place*, ordinarily, to the use of corrosive sublimate. It would, perhaps, not be easy to say why I adopted its use years ago, except from noticing its magical influence over specific sore throats. (How perpetual and enduring the alliance between Hermes and Aphrodite!) Then if it relieves one poison affecting the throat so readily, why not another? At all events, I have used it advantageously and satisfactorily for years.

I believed with Dr. Jodin, of Paris, in the presence and influence of a parasite, a *contagium vivum*, accepting to a certain extent his dicta: 1. That the concretions, the source of all the symptoms, are products of parasitic or vegetable origin; and, 2. That the basis of treatment consists in the application of topical parasiticides, a medication as rational as it is happy in practice.

But this view is not quite broad enough, so I agreed yet more fully with Dr. Laycock, who believed the parasite to be in the blood, as well as in the false membranes, and who says summarily, "that antiseptics and parasiticides appear to be the most efficient remedies in diphtheria. I can speak most favorably of the sesquichloride of iron and hydrochlorate of potassium."

These two agents, indeed, seem to be in universal use, but in addition, I very often make the iron the vehicle for the corrosive sublimate. I give, for example:

℞.—Bichlor. Hydrarg. . . . gr. j.
Tinct. Ferri. Chlor. . . ℥ss–℥j.
Potass. Chlor. . . . . ℥ij.
Aq. . . . . ℥iij—M.
S.—Teaspoonful as directed, in sweetened water.

I find among my prescriptions such a formula as follows:

℞.—Hydrarg. Chlor. Corros. . . gr. j.
Ammon. Chlor.
Potass. Chlor. . . . āā ℥ij.
Aquæ, ... Oj—M.
S.—To be used as spray and gargle, as directed.

The spray is often pressed too hurriedly by the attendants to the annoyance of the patient, to whom it may become very repugnant; a puff of spray and a free inspiration of air, alternated, will usually be well borne.

In a case under the care of Dr. Jenkins recently, to which Dr. O'Donovan and myself were called in consultation, we gave the exact doses as directed by Dr. Pepper (or Dr. Linn), with the happiest effect. When I first saw the child the visible exudation had nearly disappeared from her throat, but the larynx was deeply affected, and the bronchial tubes, with pretty rapid extension to the smallest ramifications; in other words, there was capillary bronchitis. Dr. Jenkins had used iron and chlorate of potassium freely, and had commenced the use of the mercury before my visit. I concurred fully in the measure, recommending the mercurial spray also. Without going into the details of a grave case of diphtheria, I may say that for some days the child appeared to be so near death that any change for the worse must have been fatal. It was a question whether she would go by asphyxia or asthenia. Meantime the mercury was given every two hours, terebinthinate and ammoniated liniment frictions were made to the chest repeatedly, and oelate of mercury (ten per cent.) was rubbed upon the throat. Twice emetics were given of ipecacuanha and alum, which brought up some loose membrane and gave some relief to the distressed respiration. Beef tea and milk toddy were given as nourishment. She was not neglected for one moment by her family and nurses during the critical time, and at length we saw her convalescence fairly established.

This was one of three very ill cases I have recently attended and treated with corrosive sublimate, all

now well, or well advanced in convalescence, for one young lady, after being free from all the primary symptoms, had obscurities of vision, paresis of the limbs, formication, difficulty in swallowing, and so much tumidity about the jaws and face, after I had ceased regular attendance, and made but occasional calls, that I apprehended a secondary nephritis. One or two specimens of urine, taken at intervals of several days, gave about the same results: Sp. gr. 1036, acid reaction; no albumen to heat and nitric acid, but some fermentation when the acid was added. White earthy deposit with Moore's test, and crystals of nitrate of urea when exposed with nitric acid.

It is about three months since the beginning of her attack, anæmia and partial paresis are still among the sequelæ, but her health steadily and slowly improves.

I mention these cases, if not very remarkable in themselves, still as confirmatory of the value of the mercurial treatment.

Dr. Pepper's recorded case must exert a widespread influence.

Perhaps all physicians habitually use alcohol in some form in serious cases of diphtheria, but, taking a point from Dr. Formad's expressed experience, I shall use it hereafter not for the single agency of support, but also for its germicide properties. It may be remarked, by the way, that nearly all the remedies highly commended by practical physicians have in a greater or less degree these same properties, upon whatever theory they may be administered.

In conclusion, let me ask how often diphtheria may recur in the same subject? I have seen secondary recurrences, but scarcely two fully developed attacks in any one individual. Some months ago I was attending a boy with an attack of it, when a little girl, a neighbor, stopped me as I left the house to inquire for her playmate, and she took occasion to inform me that she had suffered with attacks of diphtheria seventeen times. I asked what physician had carried her so safely through, when she informed me that it was Dr. ——, of the infinitesimal school. I did not wait to get any details of diagnosis, pathology or treatment, and therefore can give no further information than in regard to the surprising number of attacks and recoveries.

BALTIMORE, August 2, 1882.

A CASE OF LONG-STANDING NEGLECTED UMBILICAL HERNIA,

RESULTING IN PERFORATION OF THE ABDOMINAL WALLS AND DEATH.

BY W. B. BARHAM, M.D.,
OF NEWSOM'S, VIRGINIA.

THE following case will, I think, be of interest to the medical profession. It terminated fatally in a few hours, and its only interest hinges upon its rarity.

On the 1st of August, 1881, I received a note from Dr. E. C. Barrett, asking me to see, with him, Mrs. E. J., aged 43, the mother of several children, and weighing about 250 pounds. He described her as being in a very curious and critical condition, and upon reaching her residence I found her suffering extreme agony, and almost in *articulo mortis*. After an examination of the case, we consulted with her husband and friends, in order to arrive at its correct history, and found that for the past four years she had, to use their language, been carrying an "immense bag," reaching from her abdomen to the knees, and that on the morning of the day on which we were called to see her, as she was ascending a flight of steps, perforation of this bag had taken place, and that her intestines had protruded. When I saw her they had protruded to the extent of about twenty feet, and were lying by her side on the bed, in a mass that would fill a half-bushel measure. After a careful examination, we found the perforation near the umbilicus, which, by the weight of the tumor, had been dragged far below its usual situation. The perforation was not more than three inches in circumference, and it was constricting the mass so tightly that it was in an almost gangrenous condition. After a hurried consultation, we concluded that the only shadow of hope for the patient was to enlarge the opening and to replace the intestines; but so great was her exhaustion, that we were fearful that she would die before the operation could be completed. The rupture occurred early in the morning, and it was two o'clock P. M. before either of us saw the patient, and it was four o'clock before we could begin the operation. After I had given her about a gill of whiskey, and had anæsthetized her, Dr. Barrett enlarged the opening to the extent of about four inches, and then came the "tug of war;" for, notwithstanding our most strenuous efforts, it took us at least an hour and a half to replace the intestines, and this having been at last accomplished, we brought the edges of the wound together, as best we could, with silk thread. After the operation was completed we again administered a gill ot whiskey, after which the patient partially revived from the effects of the operation, but died from exhaustion in about two hours.

Remarks.—This case is reported because I believe it to be uncommon. I have consulted all the surgical authorities accessible to me, and find that there are few such cases mentioned. Dr. Agnew, in his "Principles and Practice of Surgery," vol. 1. page 497, mentions the case of an Irish woman, once under his care, in which ulceration and sloughing of the abdominal tissues took place. I am well aware that umbilical hernia, especially in obese women and those who have borne many children (and this was the case with our patient), often occurs; but such a termination of umbilical hernia as here reported I claim to be rare, and for that reason I thought that this case might be of interest to the profession.

Of course, nothing is claimed as to our treatment. We did all we could, but it was one of those cases which, unfortunately, too often occur, in which our best efforts mock us. We had but little hope for the patient from the first, but a desire to do something for her, and to give her the benefit of the chance of recovery, slight though it was, prompted

us to perform the operation. The perforation of the abdominal walls took place early in the morning, and it was several hours before either of us could see her. In the mean time exhaustion and gangrene of the intestines had done their fatal work; whereas, could we have seen her at once, the case might have resulted more favorably.

Her husband informed us that the hernia appeared about four years ago, as a lump about the size of his fist, at the umbilicus, and that it gradually increased in size, until the rupture of the abdominal walls took place. In this case it is probable that the parts covering the hernia became attenuated, the peritoneum and fascia disappeared by absorption, and the contents of the tumor came almost directly in contact with the skin, and this condition continued until, upon the exertion of ascending a flight of steps, the abdominal walls ruptured, and protrusion of the intestines took place.

No doubt such a termination might have been prevented, had the patient submitted to surgical treatment when the tumor first appeared, but notwithstanding the urgent appeals of her husband and friends, she persisted in her refusal to submit to such treatment, until neglect resulted in death.

MEDICAL PROGRESS.

CARCINOMA OF THE COLON: RESECTION: CURE.—M. NICOLAYSEN reports the case of a woman, aged 49 years, who, for a year, had suffered from constipation alternating with painful, bloody, and mucous stools. A tumor could be detected high up in the colon, which could be forced into the rectum by the expulsive efforts of the patient. The operation was performed in the following manner: after having forced the carcinomatous tumor into the rectum, the patient was chloroformed, the rectum washed out with carbolized water, the bladder emptied, and the tumor drawn outside of the anus. The left index finger was introduced into the intestinal canal 2½ cm. above the limits of the neoplasm and the walls of the colon, which at this level were perfectly healthy, pierced by a row of sutures extending completely around the bowel. The diseased portion was then excised 1 cm. below the sutures, which closed the tubes so well that only a single ligature was required. The edges of the wound were then united by sutures and the bowel released; it immediately retracted. The patient was cured in fifteen days, and no trace of the seat of operation could be detected in the rectum. The excised portion was 6.5 cm. long. The patient was in good health two months and a half after the operation.—*Nordiskt Medicinskt Arkiv*, 1882, No. 8.

IODOFORM IN LUPUS.—DR. RIEHL (*Wiener Med. Wochenschrift*, 1881, xxxi. p. 534) has used this drug as a local application in lupus vulgaris with flattering success. In order to remove the epidermis and thus render the diseased tissues accessible to the action of iodoform, a fifty per cent. solution of caustic potash was applied to the skin after removal of all dirt and grease from the same by means of washing with soap and water. Left in contact with the skin a caustic solution of this strength in from one-half to two minutes caused transparency, swelling, and detachment of the epidermis. This effect produced, the excess of caustic potash was washed off with water, the surface thoroughly dried, and a layer of finely powdered iodoform from one to two millimetres in thickness was applied to the surface which had been denuded of epidermis. This, covered with cotton batting, retained in place by strips of sticking plaster, was left undisturbed for from five to eight days. In no case was there suppuration, and on removal of the dressing the iodoform was found embedded in the depressions due to the disappearance of diseased tissue. Adherent at some points, at others which were in process of cicatrization the iodoform was merely superimposed. The sound skin between the points of pathological infiltration was pale and soft, and the general swelling and rednesss of the parts had in great measure diminished. In severer cases, while there was never suppuration, two or three successive applications of this dressing were required before the pathological infiltration of the tissues disappeared. The application of iodoform to surfaces of skin denuded of epidermis, caused neither pain nor any disagreeable sensations. To do away with the pain necessary to the application of caustic potash, local anæsthesia may be used. The author has employed this dressing in twenty cases of lupus, and always with good result.—*Arch. of Derm.*, July, 1882.

GONORRHŒAL ARTHRITIS.—PROF. PETER pointed out a case at his clinic (*Gaz. des Hôp.*, June 17th) in illustration of the fact that in the so-called gonorrhœal rheumatism the joint is not the seat of the affection, but the adjoining white tissues or "tenosity;" and that consequently there is no complication from heart disease, while the prognosis is much more favorable. The gonorrhœal discharge exerts no specific effect in producing it, any genital irritation being competent to do this, acting through some ill-understood mechanism, as in profuse leucorrhœal discharge, or the sudden arrest of the menses. In this case abundant gonorrhœal discharge was present in a woman, and the left ankle-joint seemed to be the seat of an attack of acute rheumatism. This, however, was not the case, and the diagnosis was obtained by the mode of examining the joint. Feeling below the internal malleolus, great pain was produced; but palpation at the external part, or in front, or deeply behind under the tendo Achillis, gave rise to no abnormal sensibility. Returning again to the inner side, and examining methodically, it was found that pain really only existed in the direction of the sheath of the tendons which passed under the malleolus internus—there being therefore only a tenosity, easy to define. It is only very rarely indeed that the joint is implicated.—*Med. Times and Gaz.*, August 19, 1882.

IDIOPATHIC SPASM OF THE TONGUE.—The isolated independent spasm of the tongue belongs to the rarest forms of spasm. Under the name "aphthongic," Fleury described a singular neurosis in the hypoglossal region, in which each attempt at speaking called forth tonic and clonic spasms of the muscles of the tongue, which rendered articulation impossible. BERGER, *Neurol. Centralbl.*, No. 3, 1882) has met with two cases, the first being that of a lady aged 28, neither nervous nor hysterical, in whom there appeared, during the last few years, whilst enjoying the best of health, a peculiar tension above the larynx, and a feeling of swelling in the tongue, followed after one or one and a half mintutes, by a rhythmical twitching of the tongue, which was propelled against the row of teeth at the rate of fifty or sixty a minute. During the attacks, which usually lasted from one to two minutes, speech was impossible. Other cephalic disturbances there were none, nor was there any anomaly either of the tongue or of the oral cavity. A course of baths in Landeck, and the use of iron spas, brough about a cure after some time. The second case was that of a man in whom, after his fortieth year (now two and a half years ago), the

tongue was periodically projected from the mouth with great rapidity and force, this happening sometimes several times in the week; at others, several times in the same day. The author assumes for both cases an irritable condition, either cortical or bulbar, of the hypoglossal nerve as the cause, and adds, as similar to the above, two observations which he has made on men aged 44 and 56, in whom there was spasm of the cremaster muscle, lasting two or three minutes, several times a day. Kissingen and Karlsbad waters cured the one case very nearly; in the second, the subcutaneous administration of atropine, and three weeks' galvanization (positive pole on the spinal cord, negative pole to the scrotum) effected a cure.—*London Med. Record*, August 15, 1882.

PITYRIASIS CIRCINATA ET MARGINATA.—EMILE VIDAL (*Ann. de Derm. et de Syph.*, 2 s., vol. iii.) describes a fungous parasite, which he claims to have discovered in this affection, and which he calls *microsporon anomœon* (*microsporon dispar*). Examined with an immersion objective, No. 10, Hartnack, epithelial scales from a patch of pityriasis circinata exhibit spores of a diameter of one micro-millimetre, many even smaller, larger spores being the exception, never exceeding one micro-millimetre in diameter. The principal characters of this fungus are: 1. The diminutive size of the spores, and their great variation in volume. 2. A circular arrangement in the epithelial cell. 3. The scarcity of chains of spores. 4. The absence, or, at least, great rarity of mycelium. The fungus affects the superficial and, particularly, the middle layers of the epidermis. It is to be observed more especially upon the face, beard, and neck. The hair escapes, and its follicle does not become inflamed. The clinical signs of the affection are described, and its differential dignosis with "pityriasis rosea, pityriasis versicolor, erythrasma, and trichophytosis circinata" indicated. Vidal has never seen the affection in persons of more than 40 years of age, and has never known it to spread by contagion. Its cure is easily effected by the use of ordinary antiparasitic remedies.—*Archives of Derm.*, July, 1882.

GASTRIC ULCER.—In the course of some experiments on the production of nephritis by the injection of cantharidin under the skin, AUFRECHT has made the remarkable discovery that ulceration of the stomach may result from these injections. After the subcutaneous injection of cantharidin, suspended in oil to lessen the local irritation, he found in guinea-pigs a large number of circumscribed changes in the mucous membrane of the stomach. These were at first regarded as merely hemorrhages, but on closer examination were found to be spots of loss of substance, the boundary of which projected above the level of the adjacent mucous membrane. These changes were especially conspicuous in the stomach of a rabbit, which died ten days after the injection of 2½ milligrammes of cantharidin. About fifteen small ulcers were found in the stomach, many of them with raised edges, and all filled with blood-clot. There were also six circular spots of a dull gray color, sharply limited, without any extravasation. A microscopical examination showed in the latter the following changes: the epithelium of the glands was paler and less granular than normal; between the glands was a clear amorphous material; the capillaries were distended with blood, whereas, elsewhere, they were empty. A similar change was found in the vicinity of the extravasations, and the glandular epithelium here presented irregularity. The extravasations were of uniform brownish-red blood, in which no intact blood corpuscles could be seen. There was no sharp limitation to the blood effused, such as might have been expected had the hemorrhage resulted from the rupture of one vessel. From these facts he concludes that the extravasation is the second stage in the process, consecutive to inflammation, which appears to be the first alteration. Aufrecht believes that these facts indicate that in man a similar sequence may obtain, and that ulcer of the stomach probably commences as inflammation, and not, as is commonly assumed, by hemorrhage.—*Lancet*, August 19, 1882.

NEW METHOD OF TREATMENT OF VARIOLA.—M. DREYFUS BRISAC has had an opportunity of testing the method of treatment of variola recommended by M. DUCASTEL, and has published his report on his results. The method consists in the administration of a mixture of ether and opium, with the separate use of perchloride of iron, alcohol, and ether, subcutaneously. He finds that it is best to omit the perchloride of iron, except in hemorrhagic cases, and that the ether injections sometimes prove irritating, but not sufficiently so to prevent their use. He believes that while the influence on the general disease is doubtful, this treatment does undoubtedly control the eruption.—*Gazette Hebd.*, Aug. 11, 1882.

SPONTANEOUS FALLING OFF OF THE NAILS IN ATAXIC PATIENTS.—This phenomenon, which is not mentioned by any of the classic authors, is, perhaps, not so rare as is supposed. One case of it is mentioned in M. Arloing's thesis, and M. PITRÉS has reported two cases in the *Progrès Médical*. In these two patients, both of whom had confirmed tabes, the nails of the great toes had come off spontaneously, without any trace of external violence. The loss of the nails was preceded for some weeks by a dull pain and a sensation of irritation in the corresponding toes, without the lightning pains being more acute than usual. There was neither suppuration nor ulceration apparent at the matrix of the nail. The nails were rapidly replaced by new nails of normal formation. It is probable that the disorder is connected with disturbances of nutrition depending upon medullary lesions, analogous to perforating ulcers, spontaneous fractures, and various eruptions. In these two cases, the repeated falling off of the nails can scarcely be attributed to external violence. A sufficiently violent wound to bring on detachment of the nail would certainly have attracted the attention of the patients at the moment of its production, and eventually produced severe pain.—*London Med. Record*, August 15, 1882.

GASTROSTOMY.—On the 21st ult. SIR WM. MACCORMAC performed this operation at Hackney, on a gentleman aged 55 years (a patient of Dr. Daly), who had malignant stricture of the œsophagus. The operation, as well as the subsequent dressings, was performed with the strictest antiseptic precautions. The procedure was divided into two stages, the stomach not being opened for fourteen days from the first operation. The temperature never rose above 98.6° or the pulse above 80. The patient, during the fortnight, was fed by the rectum, defibrinated bullock's blood being chiefly used for this purpose. The patient recovered without any unfavorable symptoms. He was up sixteen days after the operation. He is now fed through the opening in his stomach four times a day; he has a pint of milk, with a couple of eggs, or a pint of beef-tea or soup, at a time. He is gaining flesh and is in good spirits. Further details of this case will be published hereafter. —*Lancet*, August 19, 1882.

SYPHILIS OF THE HEART.—Only nineteen cases of this rare affection have been hitherto described. To these B. TEISSIER (*Annales de Derm. et de Syph.*, 2me ser. t. iii., No. 6) adds another, essentially as follows:

A prostitute, 27 years of age, in the third year of syphilis, which, however, had only manifested itself in the form of buccal mucous patches, was suddenly seized with dyspnœa, followed by asphyxia and death within twenty-four hours. The autopsy showed extensive involvement of the anterior walls of the right ventricle in its upper half, the muscular tissue of which seemed to have become entirely transformed. The thickness of the cardiac wall appeared about normal, but it seemed of a peculiar light gray color, and its consistence much firmer. Section showed numerous milk-white lentil-sized nodules, both in the cardiac walls and elsewhere. These presented a caseous appearance, but were in reality of quite firm consistence, showing no trace of softening even in the centre.

In addition to the interstitial myocarditis and the gummatous deposits, there were considerable vascular alterations in the form of peri-arteritis, endo-arteritis, etc.—*Archives of Dermatology*, July, 1882.

EXCISION OF THE PYLORUS.—DR. VAN KLEEF, of the Hopital de Calvaire, Maestricht, relates in the *Presse Méd. Belge*, July 23d, the case of a woman, aged 37, upon whom he performed excision of the pylorus on account of stenosis, supervening on ulcer of the stomach attended with severe hæmatemesis. She had become greatly reduced in strength, and for some time past had been fed by the rectum. The indurated pylorus, when removed, measured 4½ by 5 centimetres, and a quill could scarcely be introduced into its aperture. The stenosis was due to cicatricial tissue, no sign of carcinoma being present. The operation lasted two hours, and an hour or two elapsed before the patient began to awake from the anæsthetic condition. Her recovery from the state of anæmia was slow but progressive, and two months after the operation she was able to leave the hospital, weighing 39 kilogrammes. At the date of the report, about six months after the operation, she weighed 45 kilos.—*Med. Times and Gaz.*, August 12, 1882.

RELATION OF DIPHTHERIA TO SCARLATINA.—At the meeting of the Societé de Therapeutique, held June 28, M. BLEODEAU referred to an epidemic of scarlatina which he had recently witnessed, in which only two out of eleven cases showed any anginose symptoms. He uses this fact as an argument against the theory advanced by M. Archambault as to the identity of scarlatina and diphtheria.—*Journ. de Méd. de Paris*, Aug. 12, 1882.

THE AURICULAR VASO-DILATOR NERVES.—MM. DASTRE and MORAT give the following *résumé* of their experiments on the vaso-dilator nerves of the auricle.

1. The auricular vaso-dilator nerves arise in the cervical region of the spinal cord.

2. On leaving the cord these nerves are contained in the anterior roots of the corresponding spinal nerves; they are especially to be found in the eighth cervical and first dorsal pairs of nerves.

3. After joining the mixed trunk of the spinal nerves, they reach the sympathetic at the level of the first thoracic ganglion through the communicating fibres.

In a word, the auricular vaso-dilator nerves have their origin in the cord, pass out through the anterior spinal roots to join the cervical sympathetic and unite with the dilators of the bucco-facial region previously described.—*Rev. Scientifique*, August 19, 1882.

FLOATING KIDNEY.—Having examined 1,422 patients (1,030 females, 392 males) at a watering-place in Galicia, the author (*Przeglad Lekarski*, 1882, Nos. 1 and 2) found in 35 subjects (32 females, 3 males) floating kidneys. In 19 patients (2 males, 17 females, 9 of whom were pluriparæ, 8 multiparæ) the right kidney floated. In 11 patients (1 male, 4 multiparæ, 6 pluriparæ) the left kidney was movable. In 5 pluriparæ, both kidneys floated. Comparing his figures with those of Landau, Dr. SKORCZEWSKI concludes that the affection under consideration is far more common than it is usually supposed, and that physicians too often overlook its existence. He supports this statement by the fact that the 35 patients were sent on account of all possible diseases except wandering kidneys. On the subject of etiology, he differs from Landau, who asserts that a pendulous abdomen prediposes to renal displacement. According to Dr. Skórczewski, such displacement depends chiefly upon on the disappearance of circumrenal fat, on atony of tissues, subsequent to acute febrile diseases, and on pressure of some hypertrophied abdominal viscera. In the author's cases, there was very often observed coexistence of floating kidneys with malarial hypertrophy of the spleen. Such coexistence was noted in 13 out of 16 cases of the left displacement, and in 13 out of 24 cases of the right; and the author emphatically recommends examination of the kidneys in all malarial affections.—*London Med. Record*, August 15, 1882.

MEMBRANOUS DYSMENORRHŒA.—DR. LUTAND concludes from a study of this subject:

1. That membranous dysmenorrhœa consists of an exfoliation of the hypertrophied uterine mucous membrane.

2. The expulsion of the mucous membrane does not take place each month; several months may elapse between each expulsion.

3. This affection is quite common in virgins and can, therefore, not be regarded as the result of conception.

4. It nearly always causes sterility.—*Ann. de Gynecol.*, August, 1882.

NEW REMEDY FOR LEPROSY.—DR. E. WESTLUND (*Transact. of Soc. of Physicians in Upsala, Sweden*), starting with the supposition that leprosy might be due to micro-organisms, tried in three cases salicylate of soda with marked effect. The first case was that of a man suffering in a high degree from lepra tuberculosa. Tubercles varying in size from a pea to a hazel-nut were found in the skin of the face, the extremities, the abdomen, the scrotum, and in the throat. The hoarseness of the voice indicated their presence in the larynx. The muscles of the hands were atrophic; the eyebrows had been lost; the hair on the head was thin and dry; the nails thick, curved, and fissured. No ulcerating tubercles. He was advised to take one gram (15 grains) of sodium salicylate five times a day in a tablespoonful of water. The patient wrote after some months to report that he was perfectly cured.

The two other cases were yet under treatment, but had improved very considerably when they were last seen.—*Archives of Dermatology*, July, 1882.

ERYSIPELATOUS ERUPTIONS CAUSED BY TINCTURE OF ARNICA.—In *L'Union Médicale*, for August 17, M. SAISSUS reports two cases in which free external use of tincture of arnica produced an erysipelatous eruption. Both cases recovered under the use of emollient applications and purgatives.

LUPUS.—The following conclusions are given by DR. RAUDNITZ (*Viertelj. f. Derm. u. Syph.*, 1882), as the result of the statistical examination of 209 cases of lupus. Neither anatomically nor clinically can a difference between scrofulous and idiopathic lupus be made out, the disease appearing in the same form in individuals already scrofulous, and in those entirely healthy.

A combination with inherited tuberculosis is only discernible in from ten to fifteen per cent. of all cases. The abscesses of the lymphatic glands so frequently met with in scrofula are almost never found in lupus. A cotemporaneous manifestation of lupus in blood relations is seen only in the rarest instances, and hereditary transmission of lupus from parents to children perhaps never takes place. The infrequency of association between lupus and pulmonary tuberculosis decidedly speaks against the identity of these affections. On the other hand the facts, that in at least thirty per cent. of the cases lupus was developed upon or only in the neighborhood of scrofulous cicatrices, or upon mucous membranes already changed by catarrhal processes; that in twelve cases, injury, and in eight cases, local attacks of erysipelas were given as exciting causes, would indicate that lupus is often due to a localized specific predisposition, the nature of which is entirely hypothetical. At all events the small proportion of cases, seventeen in number, in which lupus was found in combination with often trivial affections of the skin, seems to contradict the assumption that in lupus we have to do with a generalized predisposition of the skin to pathological changes.—*Arch. of Derm.*, July, 1882.

INTERNAL URETHROTOMY.—PROF. T. F. KOSINSKI, in a very interesting article based on his own 103 cases (Maisonneuve's) of internal urethrotomy (*Gazeta Lekarska*, 1881, Nos. 78–80), points out the advantages of this treatment in urethral stricture. The operation he regards as extremely simple and easy, and the injury caused by Maisonneuve's instrument as very slight and entirely free from any danger. The wound heals rapidly, and the subsequent introduction of bougies, practised during certain (considerably long) periods, successfully completes the treatment. The author's cases were all severe; some of them were complicated by urethral and vesical fistulæ, and the operation was resorted to only after gradual and slow dilatation had utterly failed to make the stricture permeable. Nevertheless, in all 103 cases, cure very rapidly followed. All patients got up in a few days after the operations, and, two weeks later, they returned to their occupations. Fistulæ very often closed spontaneously after the urethra had recovered its lumen. The author advises to split the anterior wall of the meatus, following the median line. After the operation, he leaves a soft elastic catheter *à demeure* for twenty-four to thirty-six hours; afterwards, the patient voids urine by the natural passage. In one-third of all the cases, on the third or fourth day after the operation, there was a considerable rise of temperature (to 102° to 104° Fahr.), followed by profuse perspiration; the further course did not show anything peculiar.—*London Med. Record*, August 15, 1882.

TREATMENT OF ALBUMINURIA WITH FUCHSIN.—Feltz and Bouchet (*Deutsch Med. Woch.*, 1879) first proposed this remedy in pills of three grains per day for chronic parenchymatous nephritis. Later, Professor di Renzi, of Genoa (*Virchow's Archiv*, vol. lxxx.), reported more fully on the use of the remedy. He gives it in pills of 2½ centigrammes (3.8 grains) each, beginning with two pills and increasing to ten per day. Under this treatment he found a marked decrease in the amounts of albumen and mucus. The drug causes distinct coloration of the urine, and if this effect is not produced, it is an evidence that the drug is not absorbed, and its use should be discontinued. Now, Dochmann (*Vratsch*), having made extensive use of fuchsin, draws the following conclusions:

1. In many cases of albuminuria, the amount of albumen in the urine is decreased under the use of fuchsin.

2. In other cases, the decrease is only apparent, as the albumen in such urine is converted into pepton more rapidly than usual.

3. The coloration of the urine by the drug bears no positive relation to the decrease in the amount of albumen.

4. Arsenic-free fuchsin can be given for a long while to adults without injury in doses of from one to two grammes per day.—*Physician and Surgeon*, Sept. 1882.

AMPUTATION OF THE TONGUE BY MEANS OF THE THERMO-CAUTERY.—In all important operations on the tongue, it is essential, 1st, that all the diseased tissue should be removed; 2d, danger of hemorrhage should be avoided; and, 3d, the entrance of blood into the air passages prevented. LANGENBECK believes that, whatever the seat of the disease, all these conditions may be fulfilled by combining his method with that of Billroth, and division of the lower jaw. From 1875 to 1881, Langenbeck made nineteen extirpations of the tongue; of these, one was operated on by the Regnoli-Billroth method, and the others by his own plan. Of these six died, and among them the case operated on by the Billroth method. Since then he has done the operation seven times with the thermo-cautery; he does not, however, state with what result. The preliminary ligation of the lingual artery is recommended.—*Journ. de Méd. de Paris*, July 22, 1882.

OSTEOTOMY—Fourteen cases in which osteotomy was done for the relief of rachitic curvatures of the limbs, for genu valgum, for ankylosis of the hip, and for complicated or viciously united fractures, serve as the basis for a recent communication by M. JULES BOECKEL, of Strasbourg, to the *Revue de Chirurgie*, No. 6, p. 461. In conneetion with these, he considers, also, nine cases communicated to the Society of Surgery, of Paris, making a total of twenty-three recent cases to be added to his previous reports on this subject. In all these cases a cure resulted. Of the whole number seven were adults of from fifteen to twenty-eight years; and fifteen were children, the youngest of whom was eighteen months, and the eldest eight years. In sixteen instances suppuration was wholly wanting, and the cases were healed with one, two, and three dressings; slight suppuration occurred in six cases; in one only was it abundant. The operation was complicated in this case by a phlegmonous erysipelas, which necessitated repeated incisions. The time necessary for consolidation to be accomplished varied from a minimum of twenty-one and twenty-eight days, to a maximum of two and three months. The final result has been most satisfactory in all the cases. A permanent cure was determined at the end of months and years—seven years in the cases first operated upon. In the opinion of the author, osteotomy, done with Listerian precautions, is, in children, so simple and harmless an operation, that their stay in hospital is unnecessary. For two years he has sent such patients to their homes, after operating, without ever having had to regret it. For the relief of genu valgum he adopts exclusively the method of Macewen.—*Annals of Anatomy and Surgery*, September, 1882.

ABDOMINAL DRAINAGE.—The following new method of drainage after ovariotomy, adopted by Dr. Kehrer (*Centralblatt für Gynecologie*, 1882), is worthy of more than a passing notice. He inserted into the cavity of the abdomen three rubber tubes into which he introduced disinfected wicks of the thickness of the little finger. The external bandage was soon wet through by the secretion, and had to be changed three times during the first two days, after which it ceased altogether. —*Canada Lancet*, September, 1882.

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SATURDAY, SEPTEMBER 9, 1882.

THE MICROSCOPICAL EXAMINATION OF GUITEAU'S BRAIN.

WE present to our readers in this issue the report of the microscopists, to whom was assigned the important task of the microscopical examination of Guiteau's brain. The gentlemen who have performed this duty are too well known as experts in this department of science to require a word of support or vindication from us. We take pleasure in the exhibition which the report makes of a truly scientific and logical spirit. The subject has been approached in a judicial temper, the examination has been made without prejudice, and the conclusions are stated with fairness.

In our remarks on the previous report of the autopsy, we maintained that there was nothing in the gross appearances to justify the theory of irresponsible mental unsoundness. But we also reserved a final judgment until the results of the microscopical examination were placed before us. We have now a demonstration of great accuracy and minuteness, involving structures not recognizable by unaided vision. With the new light thus thrown on the case what opinions must now be formed? The organic substratum on which the mental operations are conducted being thus exposed, what conclusions must be settled upon regarding the mental condition of Guiteau?

The changes discovered were chiefly in the vessels, the perivascular lymph-spaces, the neuroglia, and the cells. We will not reproduce here the details, since our readers can follow them leisurely in the report, assisted by the accompanying figures. Our function, more especially, is to interpret the significance of the pathological changes, and trace, if we can, the relation between them and the mental condition. At the outset we are debarred from throwing any doubts on the genuineness of the microscopical demonstration. Post-mortem changes, and alterations due to the methods of preparation pursued, are often alleged against the results of such minute researches. That this distrust of microscopical work is abundantly well founded, is proved by the sad mistakes of the most eminent workers. But in this instance there are means of control. Healthy and diseased structures being subjected to the same methods, the results of comparison can be relied on.

Accepting therefore the observations of the microscopists making this report, as accurate, the first conclusion we reach is—that the changes for the most part are recent in origin. Whilst numerous lymphoid cells migrating from the vessels, distended the perivascular lymph-spaces, and the pericellular spaces, the anatomical elements—the nerve corpuscle, and the neuroglia cell—were generally preserved, although in some instances they were destroyed. Masses of pigment, remains of red corpuscles, in some places filled the lymph-spaces, but generally only lymphoid cells were present. In some instances the vessel walls presented the appearances of granular degeneration, but more frequently only the endothelium exhibited this change. As regards the white fibres, there were seen, in various places, numerous lymphoid cells, on and between the separate bundles, resembling in appearance the changes in the optic nerve in descending neuritis. The above-mentioned alterations of structure in the corpus striatum were found here and there disseminated "among tissues in which nothing distinctly abnormal could be made out."

From the point of view of the mental condition, the greatest interest attaches to the examination of the different layers of the cortex. Some thinning of the first layer was noted, and more or less cellular hyperplasia. Some granular degeneration of the walls of the vessels was discovered in the second, fourth, and fifth layers. In this region, also, there was more or less pigmentation of the cells, and lymphoid cells were contained in the intercellular spaces, but the anatomical elements were for the most part present. Atrophic degeneration to any marked extent, we do not find to have taken place, notwithstanding we admit the existence of the vacuoles observed at various points. The changes just referred to were most marked in the anterior portion of the gray cerebral matter, but were generally diffused, although less in amount, as the examination extended through the cerebral cortex posteriorly.

As the anatomical elements were, for the most part, in their usual form and position, although somewhat changed by pigmentation, by the presence

of lymphoid cells, etc., and as there were only in the dura mater but doubtful evidences of any inflammatory action of a chronic type, we are led to the conclusion above expressed, that the changes revealed by the microscope, although, as stated in the report, chronic in type, are recent in origin. Such an amount of granular degeneration of the vessels as here described may be effected in the brief space of time in which such changes are wrought in acute phosphorus poisoning.

Quite apart from the time in which these structural changes have occurred, is the question of their influence on the mental state. As a marked degree of double optic neuritis may coexist with preservation of quite sufficient acuteness of vision for all ordinary purposes, so considerable changes of the organic substratum may coincide with fairly good intellectual powers. In the case of Guiteau, some changes are discovered, on microscopical examination, but do they necessarily imply a degree of mental weakness incapable of distinguishing between right and wrong? We hold that they do not. Furthermore, these changes are we believe recent in origin, therefore they hardly involve the question of his moral responsibility anterior and up to the commission of his crime. They constitute the initial stage of a malady, which, in its fullest development, is known as dementia paralytica or an allied disease; the early symptoms of which disorder correspond closely with the mental condition of Guiteau during the past year.

As, however, extensive lesions of the brain are not incompatible with a normal exercise of the intellectual faculties, it follows that the mere structural changes of the organic substratum, cannot be safely interpreted alone. The clinical history must be studied in connection with the alterations in the cerebral structures. If we pursue this logical course, we can be conducted but to one conclusion: that, although Guiteau was not strictly normal in respect to the condition of the organic substratum of the mind, and in respect to its symptomatic expression, he was, nevertheless, a responsible agent, in that he had a clear conception of the distinction between right and wrong, and realized the nature of the crime and its punishment.

There is, therefore, in the microscopical revelations, no reason for changing the opinion which we originally expressed, that Guiteau, an abnormal character, justly suffered the penalty of the law for the high crime he had committed.

PROFESSOR ESMARCH ON THE CASE OF PRESIDENT GARFIELD.

THE time has almost arrived when a reply to an attack on the course pursued by President Garfield's surgeons will, by mere iteration, have lost its interest to the profession, the great majority of whose members have long since come to a final—and a favorable—conclusion upon the subject. The adverse criticism in this country has emanated, almost without exception, from writers whose lack of surgical eminence on the one hand, and of personal familiarity with the case on the other, has greatly weakened or discredited most of their assertions.

The former of these disqualifications cannot, however, be said to apply to Professor Esmarch, who has delivered a lecture upon the subject, and has concluded that, if no search had been made for the ball, and the wound had been dressed aseptically, the patient would have been alive now.

He reaches this sweeping conclusion by the following steps, which we may venture to criticise as we mention, beginning with his statement that the wound was not in itself absolutely fatal. Upon such a question the dictum of no one man can be accepted as final, and even Prof. Esmarch's reputation will not support him against the united experience of the profession. He was of course familiar with the character of the wound of the vertebra, and he apparently does not question the probability that the splenic artery was injured either by the bullet or by a splinter of bone, although he says that this would not have led to the formation of a false aneurism, except for the establishment of "putrid suppuration." Until he can point to a case of perforating gunshot wound of the body of a vertebra followed by recovery, and can at the same time explain why an arteritis excited by injury or by the presence of foreign particles is not competent to give rise to a false aneurism, or can give reasons for believing a rupture of the splenic artery to be a non-fatal accident, we must take the liberty of differing with him on this first and most important point.

His subsequent argument rests upon the assumption that death was due to this "septic suppuration," to which he attributes the splenic aneurism, and that the formation of unhealthy or poisonous pus, was, itself, a direct result of the "repeated probing and examination of the wound with instruments and fingers not rendered aseptic; the failure to dress the wound aseptically; the syringing out of the wound with fluids not sufficiently antiseptic; and the failure to give a complete vent to the 'bagging' pus."

These statements are not in consonance with the facts of the case, and illustrate the impropriety of attempting to criticise a course of treatment the details of which have never been authoritatively set forth, owing to the interruption in the preparation of the surgical history of the case, caused by the severe illness of Dr. Woodward, to whom this task was assigned. An examination was made immediately after the accident, at the spot where it

occurred, and again, on the evening of the same day, when the President was apparently sinking from the effects of internal hemorrhage. These were, of course, absolutely required, and as far as regards the first one, at least, were made under circumstances which did not admit of antiseptic precautions. Subsequently, until the occurrence of suppuration, no further interference with the wound took place. Professor Esmarch has probably been misled in this respect, by the inadvertent statement of Dr. Bliss, in his published account of the case, that the consultants on the occasion of their first visit, introduced probes and flexible bougies into the wound. This error was not committed, and we have the highest authority for stating that no such examination was made then, or at any subsequent time, although the so-called "neglect" to explore the wound, has been made the basis of equally severe—and equally unjust—criticism on this side of the Atlantic. Dr. Bliss has since pointed out that his mistake was due to the hasty preparation of his paper, from memory and without reference to notes. It should be remembered that Professor Esmarch's hypothesis, that the patient would have been benefited if "*no search*" had been made for the ball, was advanced with a full knowledge of the results of the autopsy. It is hardly to be believed that he or any other experienced surgeon would have felt justified on the first examination in entirely refraining from exploration, or would have expressed any such ante-mortem opinion.

It is not true that the wound was not dressed aseptically, or that it was not syringed out with antiseptic fluids. Whether it was made completely "aseptic" in the absolute sense in which Prof. Esmarch uses that term, is another question, but no practical surgeon can fail to understand the almost insuperable difficulties which stood in the way. A wound, contused and lacerated like all gunshot injuries, splintering bone, passing through a dense fascia like that covering the psoas muscle, through muscular fibres running at right angles and tending to close over it, and again through bony structures, opening venous sinuses, and forcing fragments of a vertebra into surrounding soft parts, is not well situated for the application of Listerism. Admitting as an axiom that all wounds *should* be rendered aseptic, it by no means follows that all wounds *can* be. Lister himself does not claim that.

Still we are authoritatively informed that what could be done in this direction was done, and that none of the precautions dictated by modern antiseptic surgery were omitted; certainly if dressing the wound under carbolic spray, washing it out with carbolated water and with permanganate of potassium, employing antiseptic gauze and other dressings, and disinfecting all objects brought in contact with it, constitute "asepticism," that condition was attained in the President's case.

As to the alleged failure to give vent to the pus, the history of the case and the post-mortem examination both demonstrate that the incisions, which were promptly made upon the earliest evidence of pus accumulation, were well planned, and that drainage was thorough and complete. The first operation was done within a few hours after the second visit of the consulting surgeons; the second operation laid open the abdominal parietes and the post-peritoneal lumbar space. That these incisions effected the desired object is conclusively shown by the absence at the autopsy of any pus collections along the track of the wound or in its vicinity.

Professor Esmarch's deserved eminence as a surgeon will give his utterances upon this, as upon all other surgical topics, wide-spread circulation, but it is not sufficient to disguise the fact that, arguing from incorrect and insufficient premises, he has reflected most unjustly upon some of his surgical peers in this country.

The mere fact that, with no precaution to verify the theories as to the details of the treatment upon which his entire argument is founded, he has voluntarily assumed the position of a critic and a detractor is of itself sufficient to take from his utterances much of their weight, and certainly will not add to his professional reputation.

We have never hesitated, since the publication of the autopsy, when it first seemed proper to discuss the subject, freely to express an opinion that the course pursued by the attending surgeons was deserving of praise and support, while that of their self-appointed critics was equally to be condemned as both unethical and unreasonable. We see nothing in the report of Professor Esmarch's lecture to cause us to change either of these opinions.

THE RELATIVE CURABILITY OF EPILEPSY AT SALPETRIERE.

DR. FERRAND has taken the above topic for the subject of his thesis (*Thèse de Paris*). The observations were made at the great hospital for the chronic insane and epileptics, under the direction of Dr. Legrand, on eighty-nine insane or idiotic epileptics. They were treated methodically with bromide of potassium, with the following result: Twelve cases were decidedly benefited, fifty-one were improved, sixteen were slightly benefited, and only ten received no benefit whatever. These figures are certainly encouraging when we remember the helpless character of these subjects.

Dr. Ferrand strongly insists on the mode of administration as an important factor in the results. In commencing the treatment, he gives two or three grammes (31 or 46 grains) or more daily, and in-

creases the quantity by fifty centigrammes (8 grains) every fifteen days or every month, until the daily quantity reaches, for women, five or six grammes, and for men six or eight grammes. Ferrand strongly criticises the method of Nothnagel and Rossbach, who advise that the treatment begin with a daily dose of five grammes (about 80 grains), and this be increased until ten, fifteen, or twenty grammes are given, a quantity that must produce the most pitiable effects. He commends the plan at present pursued by Dr. Legrand, which is as follows: After the attacks are suspended for one year by the administration of the bromide, as above suggested, it is given six days in the week; after fifteen months, five days; after eighteen months, four days; and after two years, three days.

Does bromide of potassium ever cure epilepsy? Opinions differ. Dr. Ferrand thinks that, administered systematically and perseveringly, all the epileptic phenomena may be entirely suspended. Aug. Voisin thinks that the curability of some cases is absolutely assured. Although Dr. Ferrand is less sanguine, and holds that the apparent cures were examples of epileptiform seizures, due to alcoholism, syphilis, plumbism, etc., he finds that many of the accompanying troubles are much modified, such as the nervous state, maniacal delirium, and the insane impulse, all of which are calmed by bromide. It exercises, too, a happy influence on the intellectual troubles. Epileptic mania is extremely improved. The nocturnal incontinence of urine is arrested by it, as also the aura; but the vertigo resists longer than any other symptom.

Bromide is eliminated by the sweat-glands, and free bromine, disengaged, excites different kinds of eruptions—acne, erythema—which sometimes give rise to unhealthy ulcers, urticaria, and eczema. Acne may be prevented by the simultaneous administration of arsenic, but ulcerations require the suspension of the remedy. The most frequent ill-results of improper methods of administration are headache, somnolence, impaired locomotion, gastric irritability, constipation, anæmia, feebleness, etc. Dr. Ferrand makes no mention of the mental disorders which have been observed in this country from the use of large doses of bromide of potassium.

IPECACUANHA IN DYSENTERY.

AN increasing professional experience in the use of ipecacuanha in dysentery, amply confirms the original statements as to its very special value. There is, however, a singular lack of appreciation of its curative effects, and an unwillingness on the part of many physicians to give the remedy in sufficient quantity.

To cure acute dysentery with ipecac, its purgative effects must be induced.

To develop the cathartic action of ipecac, it must be taken in quantity.

It has been found that from one scruple to one drachm, every four hours, until the characteristic stools are produced, is the amount necessary. How to secure the retention of this quantity by the stomach is a vexatious problem. Combination with aromatic powder sometimes suffices, and this should not be neglected in any case. The conjoint administration of carbolic acid and bismuth, will diminish the irritability of the stomach. The powder is best swallowed mixed in milk; a mustard plaster should be previously applied to the epigastrium, and some bits of ice allowed to melt on the tongue until the nausea ceases. If rejected several times, presently tolerance is established, when the maximum doses will be retained. When "the ipecac stools," as their peculiarity entitles them to be called, are passed, astringents complete the cure.

CHLORATE OF POTASSIUM IN EPITHELIOMA.

IN an elaborate article on the various modes of treating epithelioma of the face, Prof. Terrillon refers to the good effects of chlorate of potassium in the more benign cases. Although he proposes other expedients, he recognizes the utility of the chlorate in many instances.

NAPELLINE.

WE have already given an account of this rediscovered alkaloid—for, as we pointed out, it had been isolated and its chemical properties defined, long before Duquesnel had resurrected it from the grave of forgotten facts. Under the stimulus of new investigations, its properties are becoming better known, and it excites the interest alike of the pharmacologist and the practical physician.

Napelline differs from aconitine—its associated alkaloid—in these respects: it is not crystallizable; it is very soluble, and it possesses properties in some degree peculiar to itself. It has a distinct soporific action, compared by Laborde to that of narceine, and it acts like aconitine in lessening the sensibility of the sensory nerves. It may be administered, therefore, in a great many painful affections, in which insomnia is a pronounced feature. Dumontpallier, who has employed napelline in his hospital practice, finds it effective in the treatment of facial, sciatic, and intercostal neuralgia.

As napelline is very soluble and diffusible, it is suitable for hypodermatic injection. Laborde has administered it in the dose of three centigrammes —about one-sixth of a grain. It is, therefore, much less powerful than aconitine.

Should future trials confirm those above referred to, napelline will occupy an important position as a remedy.

SPECIAL ARTICLE.

OFFICIAL.

REPORT OF THE MICROSCOPICAL EXAMINATION OF THE BRAIN OF CHARLES J. GUITEAU,

WHO DIED BY HANGING JUNE 30, 1882, AT THE UNITED STATES JAIL, WASHINGTON, D. C., IN EXECUTION OF JUDICIAL SENTENCE.

D. S. LAMB, M.D.

SIR: The committee of three whom you, with the assent of Rev. Dr. W. W. Hicks, requested to make a careful microscopical examination of sections from the brain, dura mater, and lung of the late Charles J. Guiteau, and to report the conditions found to be present, have completed their investigation, and have agreed upon the following:

REPORT.

Thin sections, prepared by Dr. J. C. McConnell of the Army Medical Museum, from the lung, dura mater, and brain, were submitted to your committee for their inspection.

The committee regret that the preparations presented did not more completely represent the whole brain and its membranes.

The Lung.—The sections of lung were from the left upper lobe. Their appearances were common to miliary tubercle. Some of the minute nodules consisted of aggregations of recently formed miliary tubercles in which giant-cells were quite distinct. Others contained older foci of similar aggregations which had undergone corneous degeneration.

Considerable pigmentation of the pulmonary parenchyma, very like that of anthracosis, was also to be seen.

Dura Mater.—The sections of dura mater were from the region of the middle meningeal artery. They showed but few, if any, signs of inflammatory action, and there was not much thickening evident.

Brain.—The brain sections comprised the following series, viz., sections from two portions of the *corpus striatum*, marked respectively, corpus striatum 1, corpus striatum 2; and sections from four portions of the gray matter of the convexity or cortex of the cerebrum, labelled respectively frontal region, convexity 1, convexity 2, convexity 3. Those from the frontal region were probably from the superior frontal convolution, whilst those marked convexity 1, 2, and 3, were cut respectively from the ascending frontal, the ascending parietal, and the superior parietal convolutions bordering upon the median longitudinal fissure, but the committee were not informed from which hemisphere.

A close examination of these sections, under a high power of the microscope, revealed the lesions noted below:

Corpus Striatum 1.—Not a few of the bloodvessels, particularly capillaries and venules, were decidedly abnormal. Their perivascular lymph spaces were often more or less completely filled with masses of yellowish-brown pigment granules, which appeared to be the degenerated remains of old blood extravasations (see *d*, figure 1).

FIG. 1.

In areas very numerous but mainly limited to the gray or ganglionic substance, the capillary blood vessels presented their walls in a state of granular degeneration (such as that indicated at *k*, figure 7). Sometimes these granules were limited within the endothelial cells, constituting the wall of the capillary, but often they were found for a considerable distance completely encircling the vessel.

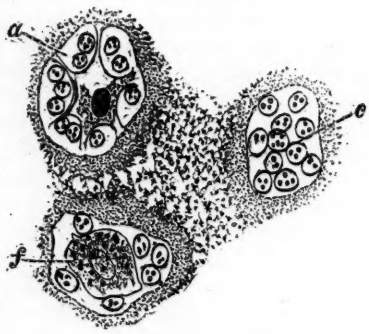
The lumen of the bloodvessels was usually void of blood corpuscles, and was patulous. A small number of very minute recent hemorrhages were to be seen.

In the gray or ganglionic matter of these sections were quite numerous areas, in which alterations of the neuroglia and of the ganglionic nerve corpuscles were very plainly visible. In them the pericellular lymph spaces were much crowded with lymphoid elements (*d*, *e*, *f*, figure 2). In some such areas, as at *e*, the whole space seemed to be occupied by collections of such cells, no trace of the neuroglia cell or nerve corpuscle remaining. Most frequently, however, neither the encompassed nerve corpuscle nor the neuroglia cell was destroyed. On the contrary, their nuclei and branched processes were generally distinct. Yet in many cases the body of the cells was extensively tinged with a yellowish-brown pigment, and, in a smaller number of cells, the presence of well-defined, dark granules in the cell-body was sufficient to mask entirely the nucleus, if any existed, Moreover, in the latter case, the cell processes were sometimes much less numerous than normal, and the body of the cell was not so angular (something of this condition is represented at *f*, figure 2).

Corpus Striatum 2.—In these sections, the neuroglia and nerve corpuscles were found to be in much the same condition as above noted.

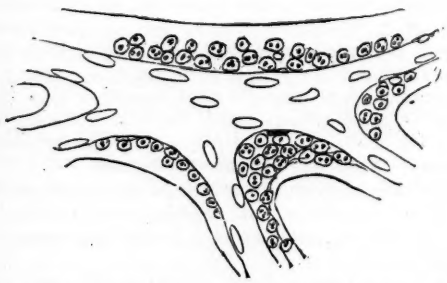
In a general way it may be stated that the cellular hyperplasia or cell multiplication was more marked than in No. 1.

FIG. 2.



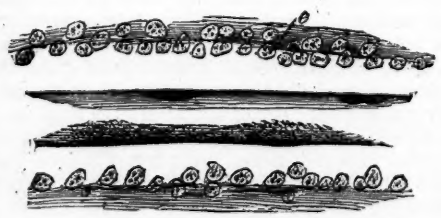
With respect to the lesions of the bloodvessels, two departures from health were noteworthy. Instead of those lesions consisting of the remains, in the perivascular lymph spaces, of blood extravasa-

FIG. 3.



tions, as in the first sections examined, these spaces at points along the course of the vessel were often found crowded with lymphoid elements. In some instances, these white cells were clustered closely around and adherent to the wall of the vessel upon its exterior, and often most abundantly aggregated in the immediate vicinity of a bifurcation (see figure 3). In others the cells were closely packed together

FIG. 4.



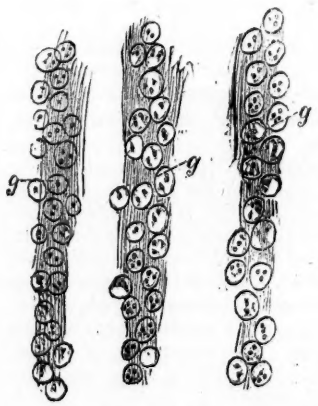
upon the external wall of the perivascular lymph space and slightly infiltrated the adjacent neuroglia (see *e*, figure 4).

In the white fibrous nerve substance there were isolated bundles of nerve fibres and collections of such bundles (see *f*, figure 5, low power, and *g*,

FIG. 5.

figure 6, high power), easily distinguished from the others by the presence, in greatly increased numbers, of cell elements upon and between them. Under a high power of the microscope, these elements were found to be outside the capillary bloodvessels, and to occupy the same relation to the nerve bundles and to the vessels, and to present the same general microscopic picture as that seen in longitudinal sections of the optic nerve in a descending optic neuritis.

FIG. 6.



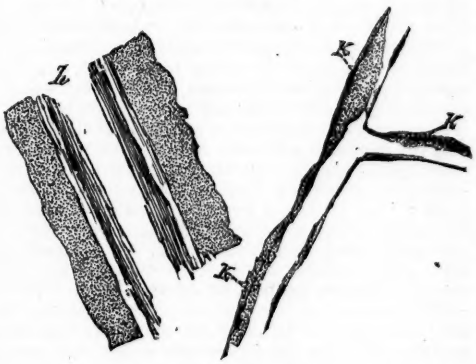
The areas of diseased structures above mentioned were more or less diffusedly scattered among tissues in which nothing distinctly abnormal could be made out.

Cerebral Cortex. Frontal region.—The first layer seemed to be thinned almost to nothing in spots at the convexity of the convolution. The depths corresponding to these spots were, perhaps, a little more hypercellular than other portions. In the second, fourth, and fifth layers, especially in the two latter, the bloodvessels presented, in a marked degree, degenerations similar to those remarked in the corpus striatum (see *h*, *k*, figure 7).

In the second, fourth, and fifth layers, the pericellular spaces, both of the neuroglia cells and of

the ganglionic corpuscles were more or less filled with lymphoid cells. In these layers, some ganglion nerve cells were also quite freely pigmented. Sometimes one-half the body of the cell was densely packed with pigmented granules to such an extent as to veil the nucleus, but the latter as well as the enclosed nucleolus even then could generally be discerned, although with difficulty.

FIG. 7.



This cellular hyperplasia was much more marked in the fourth and fifth layers than elsewhere, and was pretty uniform throughout them, yet even here there was an obvious tendency to distribution *en plaques*.

In the subjacent white nerve fibrous substance, the vessels were also sometimes slightly altered, and a few examples of cellular hyperplasia along the nerve bundles, much as was described for the corpus striatum, were rarely seen.

But few recent hemorrhages were visible in the sections examined.

Covexity Nos. 1, 2, 3.—The same abnormal appearances were remarked in all these sections, varying only in degree. It is sufficient to state that they were usually identical with those noted in sections from the frontal region, the only difference worth mentioning being the fact that the areas in which the vessels offered a granular degeneration were much less numerous and extensive than in the frontal region.

In the foregoing report it is to be assumed that the structures not specially mentioned were found in a condition so nearly normal as to call for no remark.

It should be stated, however, that in these various brain sections numerous so-called minute vacuoles were found. Whether these forms were real cavities or were transparent, highly refracting bodies of a definite constitution which was not revealed by the method of preparation, the committee do not undertake to say. Neither do they, in view of the widespread difference of opinion among observers, feel warranted in expressing a positive opinion as to whether or not these so-called vacuoles are to be regarded as post-mortem changes.

As bearing somewhat against the assumption of a post mortem origin for such appearances in general, the following facts, besides many other considerations, may be referred to:

1st. They are not constantly found in brains which have been obtained thirty-six and forty-eight hours after death, long after decomposition has set in.

2d. They have not infrequently been found in brains of animals killed for the purpose of experiment, when the nervous tissue has been instantly subjected to the action of the most perfect preservative fluids.

3d. They have been met with when the brain substance has been examined perfectly fresh.

4th. If they are the result of post-mortem change, they should not be met with immediately after death, but should appear and increase in number as decomposition advances. Yet no such relation to the time of death and state of decomposition has been observed for them.

In estimating the significance of these vacuoles in Guiteau's brain, it should be remembered that the specimens were obtained and submitted to the action of the preservative agents not more than five or six hours after death, an early period rarely possible with human subjects; that the microscope showed the elements of the brain well preserved in other respects; that in some brains examined forty-eight hours after death these appearances are absent, and in others they are often less numerous than they were found to be in this particular brain; finally, that they were associated with abnormal conditions of the bloodvessels and of the cellular elements of the brain.

In conclusion, your Committee have no hesitation whatever in affirming the existence of unquestionable evidence of decided chronic disease of the minute bloodvessels in numerous minute diffused areas, accompanied by alterations of the cellular elements in the specimens of brain submitted for their examination. Whilst the lesions found were most marked in the corpus striatum and in the frontal region of the cerebral cortex, yet they very diffusely pervaded all portions of the brain which the sections represented.

They are of the opinion that all of the lesions to be recognized in the sections placed in their hands have been pointed out in the foregoing report. They regret that it has not been possible to subject the tissues to all the tests which might determine the nature beyond a peradventure of the so-called vacuoles referred to.

They have not been called upon to pass upon the bearing the lesions found might have upon the state of the subject's mind, and, therefore, do not offer an opinion.

Respectfully submitted,

J. W. S. ARNOLD,
E. O. SHAKESPEARE,
J. C. MCCONNELL.

SEPTEMBER 4TH, 1882.

Dr. Lamb furnishes the following measurements of Guiteau's skull:

Cranium of a male, age nearly 41.

Internal capacity,	1530 cc.
Length,	182 mm.
Breadth,	144 "
Breadth of frontal,	97 and 125 "
Height,	133 "
Index of foramen magnum,	45 "
Frontal arch,	290 "
Parietal arch,	323 "
Occipital arch,	243 "
Longitudinal arch,	380 "
Circumference,	521 "
Length of frontal bone,	127 "
Length of parietal bone,	135 "
Length of occipital bone,	183 "
Zygomatic diameter,	125 "
Facial angle,	71°

Skull, mesocephalic.

SOCIETY PROCEEDINGS.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Sixth Annual Meeting, held at Newport, R. I., August 30th and 31st, and September 1st, 1882.

THE American Dermatological Association held its sixth annual meeting at the Ocean House, Newport, R. I., August 30th and 31st, and September 1st, 1882, holding morning and evening sessions daily. DR. JAMES NEVINS HYDE, of Chicago, President, and Dr. W. A. Hardaway, of St. Louis, Vice-President, presided over the deliberations of the Society.

AUGUST 30TH—FIRST DAY.

After a short business session, with closed doors, the morning session was opened by the following

ADDRESS BY THE PRESIDENT, DR. JAMES NEVINS HYDE,

Gentlemen of the Association: It becomes my agreeable duty to utter a few words of greeting and welcome at the opening of the sixth annual meeting of the American Dermatological Association.

The mere announcement of this fact suggests to us that this is an occasion for congratulation. The survival, for even this relatively brief period of time, of any special association of American physicians, ought in some measure to demonstrate that it had occupied its ground and was giving promise of a future. But when such an association is in position to give a good account of work actually accomplished, surely this supplies both a reason for its existence and an argument for its perpetuity.

Five years do not, it must be admitted, furnish a measure of time on which to predicate maturity, but five years of dermatological work in this day of intellectual activities and scientific appetite, five years of this work done in an association without a predecessor and in the absence of precedent, five years of such work in a country where the special cultivation of the field is of comparatively recent date, this may indeed be a source of profound satisfaction. During these few years of its existence this Association has been in actual session for less than a fortnight altogether, yet the labor which it has stimulated, the influence which it has exerted, and the position which it has attained both in this country and abroad as a body of scientific co-laborers, all these are to be estimated by another standard than that merely of time. Were its work to be concluded with this session, and the last paper to which it should listen be that read on the closing day of this meeting, I should find no fewer reasons for congratulating you on the results accomplished in these five years of labor. No man could sit down to-day to write the history of the progress of medicine in this country for a similar period and omit to mention the contributions to its literature directly and indirectly made under the auspices of this Association. No man could sit down to-day to trace the progress of medical education for a similar period in these United States of America, and be silent upon the increased attention given to the study of cutaneous diseases in our schools of medicine. A large part of this, indeed, is due to the presentation, on the part of this Association, of the claims of such study to a higher recognition, based not merely upon the attractiveness and interest which it always awakens but upon its essential importance.

Five years ago many of our recent graduates in medicine recognized eczema only as a vesicular disease, and their armamentarium for cutaneous maladies was restricted to arsenic for internal use and the benzoated oxide of zinc ointment for topical employment. To-day, many even of our undergraduates who have not yet passed their final examination for a degree, can distinguish between the varieties of lupus, can point out the lesions of pediculi on the skin of the syphilitic patient, and can affirm that this or that eruption is of artificial origin. I do not think that it is claiming too much to hold that for this improvement and promise the influences exerted by this Association are in part responsible.

Reviewing, then, even for this relatively brief period of time, the results actually accomplished by the American Dermatological Association, it occurs to me that we can find reason for congratulation in the following facts:

First. The ground has been occupied. The Association has demonstrated its existence and its capabilities of usefulness to the medical profession of the country. It is here recognized as solely assuming to limit its membership to experts in the field which its occupies; and its proceedings have attracted an attention and been awarded a meed of authority largely proportioned to these conditions.

Second. It has avoided dangers which beset the path of many ventures and experiments. It has assumed no financial obligations which it was not in position to redeem. It was, at the time of its first organization, fortunate in the adoption of a sufficiently simple scheme of self-perpetuation and procedure, in consequence of which it has been enabled to escape the burden of an elaborate and complicated system of rules. It was, moreover, in no haste to enlarge its membership, wisely preferring that its portals should be opened to those only who had previously demonstrated their special fitness for such honor. It has also escaped the dangers incidental to bodies composed of an equally limited number of men acknowledging a community of interests and actuated by similar motives. Its discussions have never lacked virility, and that degree of divergence of opinion and practice which will always characterize the disciples of a true science, so long as there subsists the recognized proportion between the known and the knowable, the attained and the attainable. That upon which we all agree, probably bears an increasing ratio to that upon which we all differ, and with this every scientific association must perforce for the time be content. When the representatives of these bodies are upon all points agreed, then the reasons for their corporate existence are reduced to the level and scope of a mere sentiment.

Third. The transactions of the Association bear witness to the creditable amount and character of the

work performed by its members, both within and without the limits of its sessions. The line of thought in which your attention is thus directed, has been in part suggested by the fact that you are this year to receive the consolidated report of the Chairman of the Committee on Statistics, covering the entire period during which those statistics have been in course of collection. This report will be fitly presented by the first President of the Association, to whose address on the occasion of its first meeting we are indebted for the suggestion, subsequently formally adopted and set in force, relative to the organization of that Committee. This report will inform you that we have collected the statistics relative to no less than sixty thousand cases of cutaneous disease, a larger number than has been heretofore tabulated in any country. The value of these figures, collected as they have been from many and distant parts of the same country, can scarcely be overestimated. It is difficult to believe that the permanent Chairman of this Committee, when his project first assumed definite shape, could have realized how rich would be the results obtained within the time thus far devoted to the work.

We can also refer with satisfaction to the value of the various papers which have been read before the Association, of the cases and specimens which have been exhibited, and of the annual summary of the contributions to dermatology.

Fourth. A final cause for congratulation may be recognized in the fulfilment of the other purposes of the Association, as these are set forth in the address of the first President of the Association, read at our first gathering. These relate to the fostering of an acquaintanceship, to say nothing of the resulting friendship between gentlemen of distant parts of the country, each of whom, however, otherwise made familiar with the special work accomplished by each other, would, without the facilities afforded by the meetings of this Association, be to that extent isolated in his professional labor and interest.

With this fair showing for the past, we naturally turn to the future. It is impossible to doubt that this Association gives a promise of usefulness to its members, and in a scarcely less degree to the medical profession of the country, whose realization will be indeed precious. By pursuing the same straight and simple path which it has heretofore recognized as safest, making sure of its facts and securing the results, with a cool disbelief for that which can not be shown to be worth accepting, it surely needs no great change in either its purpose or policy to reach the desired end.

The President then offered a few suggestions as to the direction and method of further development of the resources and opportunities of the Society, and concluded by expressing the hope that he who shall in five years from this time, pass under review the achievements of this Association during the first decennial of its existence, may find it his agreeable duty to chronicle a proportionately larger measure of good results accomplished, and to point to no less brilliant prospects in the future.

DR. C. HEITZMANN, of New York, then delivered an oral communication entitled,

STUDIES ON MYXO-ANGIOMA OF THE SKIN, CLINICAL AND MICROSCOPICAL.

The peculiar vascular formation sometimes improperly termed *teleangiectasis*, which means simply a dilatation of the vessels, is a very common affection, and may be found on almost any skin. It consists of a new growth of vessels, and is, therefore, a true angioma. It appears in (1) a superficial form, *simple angioma;* (2) invading the glands, *lobular angioma;* (3) entirely subcutaneous, *cavernous angioma.* He confined his remarks to the first form. Microscopically the bloodvessels in this variety were sometimes found imbedded in a homogeneous substance, which it is impossible to define either as myxomatous or sarcomatous, but from other studies he had reached the conclusion that it is really myxomatous, and, therefore, according to the nomenclature of the Association it would be called a myxo-angioma—*myxo* describes the character of the growth, *angioma* indicates the presence of vessels. They vary in size, sometimes are progressive, though they do not generally grow to a great size; at others they remain stationary for an indefinite period. Hardly raised above the skin usually, they yet may appear as lentil or pea-shaped excrescences; they are readily recognized by their red color which can be made to fade on pressure; it is generally of a dark hue. They occasionally ulcerate, and sometimes bleed. They may be successfully extirpated in two ways; if pedunculated, they may be cut off with the scissors, and the next moment applying a stick of nitrate of silver, or smoking nitric acid to the spot; if they are sessile, the smoking nitric acid should be applied directly. He had used the galvano-cautery only to a slight extent, but his experience with electrolysis in epilation had taught him that this method might also be useful in the treatment of angiomata.

As regards etiology, he was unable to give any explanation of the cause of the myxomatous degeneration or of the increase of the bloodvessels, but from careful observation he was able to describe how the new formation occurred, the new vessels budding out from the walls of the old; at first they are solid, and afterwards become tubular.

Dr. J. NEVINS HYDE, of Chicago, read a paper on

DERMATITIS PAPILLARIS CAPILITII.

This he described to be a localized inflammation of the deeper structures of the skin, occurring in patches on the nucha, especially beginning at the junction of the hairy scalp with the neck. The patches were not uniform in size, but varied up to the size of the palm of the hand. The border of the *plaque* is usually irregular, and is sharply defined, the whole *lesion* being elevated more or less. The surface was not pigmented, nor otherwise affected. In shape the patches were irregularly roundish. Upon making a small opening in the centre of the lesion, a considerable quantity of pus exuded, followed by thin mucus-like fluid tinged with blood. By pressure the subcutaneous cavity which evidently existed, would slowly empty through the puncture, and when pressure was removed, the cavity would gradually fill with the bloody fluid referred to, which could again be forced out by pressure. This manipulation could be repeated several times. The fluid was suggestive of that recognized in the form of ringworm known as *kerion*, but no parasite was present, and the lecturer was disposed to regard the affection as an inflammation of the deeper structure of the skin of the hairy scalp, which assumed at its commencement the papular form.

At the EVENING SESSION, DR. ROBERT W. TAYLOR, of New York, read some

NOTES ON PSORIASIS.

After calling attention to a view concerning the pathology of psoriasis expressed by Erasmus Wilson, that it was a remote outbreak of syphilis after transmission through several generations, he said that he had been interested in investigating the possible relationship, and had made a practice for several years of interrogating patients closely as to the existence of syphilis in the family. Further observation had impressed upon him that, in fully twenty-five per cent. of his cases, he could obtain a history of syphilis in one or both parents. In none of these was the specific disease in an active stage.

In one, syphilis had occurred fifteen years before, and in another the last outbreak had appeared fully three years prior to the birth of the child affected with psoriasis. In all the cases the psoriatic children had been the later ones; in one instance the sister had notched teeth and other evidences of syphilis, but the brother born afterward was afflicted with psoriasis. Usually psoriasis shows itself before puberty, he had seen it as early as the second year, and in most cases the first manifestation occurs in the early years; it is a disease incidental to the developmental period of human life. Certain cases of papular syphilis show some resemblance to psoriasis that are perplexing, it is also like it in the inveterateness of the disorder.

As Hebra has taught, the prognosis of psoriasis is usually bad, still it may be cured, if treated early, in a great many cases. In young subjects the combination of arsenic and mercury known as Donovan's solution had proved very efficient in his hands. After the disease has existed for a long time and impressed the pathological tendency upon the skin, it becomes much more difficult to overcome.

DR. ROHÉ, of Baltimore, read a report of

TWO CASES OF ACUTE GENERAL PSORIASIS FOLLOWING VACCINATION.

The first case was that of a physician, aged twenty-eight, who had never suffered from any skin affection, rheumatism, gout, or syphilis. Neither had any of the recognized manifestations of these disorders appeared in any member of the patient's family.

About ten days after an unsuccessful vaccination with bovine virus in last January the punctured spot became scaly and very itchy and reddened. In the course of the following two weeks the entire body, except the palms of the hands and soles of the feet became covered with small, scaly, red papules, which rapidly enlarged. The eruption was more thickly aggregated on the extensor surfaces of the arms, the thighs, and trunk. The itching was very intense, interfering seriously with the rest and nutrition of the patient. The diagnosis of acute general psoriasis was made after a few days' observation of the case.

Under arsenic the trouble grew worse, the irritation increasing considerably. The arsenic was stopped and acetate of potash in half-drachm doses, with half a drachm of fluid extract of taraxacum, was ordered thrice daily, with a daily hot bath rendered alkaline with carbonate of sodium. In three weeks after the beginning of the alkaline treatment the eruption had entirely disappeared. The spots retained the characteristic dark-colored pigmentation of psoriatic *plaques* for some time after the production of scales and the infiltration of the skin had disappeared.

The second case was that of a nine-year old boy who, several weeks after a successful vaccination with bovine virus, developed an attack of general psoriasis, which yielded to the administration of Fowler's solution in three-drop doses.

Dr. Rohé stated that he had not been able to find in the literature any mention of the connection of psoriasis with vaccination.

CALX SULPHURATA.

In a short communication, Dr. H. G. PIFFARD referred to the observation of Ringer, concerning the use of sulphide of calcium in acne, and said that he could confirm it from his own experience. There is largest variation in the composition of the salt as dispensed by druggists, some of it being nearly free from sulphur, and one specimen he had examined contained no sulphide of calcium whatever. At best, its composition is not uniform, and therefore the new pharmacopœia would consider it under the title of "sulphurated lime." Pure calcium sulphide is a pharmaceutical curiosity, and would be much more expensive.

He attributed the reported failures from the use of this drug to the defective composition, and to the habit of increasing the dose. It should be given ordinarily in doses of gr. $\frac{1}{10}$ to $\frac{1}{6}$, and rarely as high as one grain. In acne, the amount should vary with the grade of the disease; the more acute it is, the smaller should be the dose; with it he sometimes uses locally a dusting powder of sulphur.

He had also used the calx sulphurata successfully, in the eczema of children, and in the eczema of the chin in the male, the non-specific sycosis of some authors; in the latter he also pulls out such hairs as emerge from pustules, and had seen very good results in cases that had resisted the local treatment alone.

In a case of diabetes, he had noticed that the sugar had disappeared while the patient was taken this drug, and two cases of swelling of the lip had yielded promptly after a few doses had been taken.

AUGUST 3D.—SECOND DAY'S SESSION.

DR. WM. A. HARDAWAY, of St. Louis, reported

A CASE OF PIGMENTED NEOPLASM OF THE SKIN.

A merchant, 40 years of age, without skin disease in his family previously, presented himself for treatment with a number of deeply pigmented spots on his face. Although he had a history of gonorrhœa, and vegetations behind the glans penis, he denied symptoms of syphilis; never had sore throat, skin eruption, falling out of hair, etc. He was married in 1878, and had two healthy children. He had varioloid in 1868; he had a discharge from the ear since childhood. He noticed a number of enlarged glands in various situations, notably in the axilla, neck, groin, and elbow, on both sides, about 1871, when he had the vegetations already noticed. To rid himself of these, he took iodide of potassium, on his own responsibility, for several months. About three months later he stopped it because papules appeared on his face, which, as they subsided, left dark pigmented spots. Subsequently, spots came without being preceded by papules, and slowly increased in size. Vigorous anti-syphilitic treatment by another practitioner produced no effect on glands or spots.

An oil painting of the case was submitted with the paper. The skin, except in the parts occupied by the patches, is perfectly normal. Besides those on the face and neck, other spots exist upon the knees and insteps. They vary from the size of a split pea up to one 2 inches by 1 inch in width, the large ones being on the neck. The general shape of the patches was oval. The centre of the lesions was pinkish, but the borders were decidedly orange-hued, the small ones were all orange-colored. The centre of large patches is traversed by vessels which do not run into the border, the small ones do not show these vessels. The border of large spots, and the surface of small ones is slightly cracked and frayed, but the large centres have a smooth epidermic covering. The orange-colored border, about $\frac{1}{8}$ inch in width, was slightly elevated, centres somewhat depressed. The smaller ones are slightly raised. Upon pinching up the neoplasm it was found that the skin was slightly infiltrated, but the patches were freely movable. The large patches on forehead appeared to be undergoing involution at the centre. There was no difference in sensibility in the patches, and perspiration was not absent. A piece of the largest patch was excised for microscopic examination, and sent to Dr. Heitzmann. The wound was united by sutures, and healed by first intention.

Dr. Heitzmann reported that the growth had the characters of a *myeloma* or pigmented medullary sarcoma of the skin.

THE NERVES OF THE SKIN.

A valuable contribution to the histology of the skin and the sensory nerves was read by DR. A. R. ROBINSON, of New York, in a contribution based upon original microscopical study of the structures named; it was accompanied by some beautiful sections for exhibition with the microscope.

In this paper the author discussed the course and mode of termination of the medullated and non-medullated nerves present in the skin. The non-medullated, he stated, form plexuses both within the skin and epidermis; but in neither situation did he find the nerves ending with free extremities, as is usually stated. The majority of the medullated fibres pass into the papillæ and form loops, the fibres returning either into the corium or into neighboring papillæ.

He described the structure of the tactile corpuscles, showing that the striated appearance depends upon nerve fibres and upon the neurilemma. This was proven by the action of a weak solution of caustic potash upon gold specimens. He reviewed the evidence in favor of the corpuscle being a structure within which the nerve fibres terminate; denying its correctness, and maintaining that the corpuscle represents only a nerve plexus, basing his view upon the following grounds:

1. Medullated nerve fibres not connected with tactile or Pacchionian corpuscles, form loops within the papillæ, and return to the corium or neighboring papillæ.

2. Non-medullated nerve fibres form loops and plexuses within the papillæ and epidermis, and probably do not terminate by free extremities.

3. In the majority of tactile corpuscles two nerves can be observed to be in connection with it, the one at the base and the other generally at the upper part.

4. Instead of a single medullated fibre at the upper part there is sometimes two medullated, or two or more non-medullated.

5. That the nerve entering at the base can often be seen winding upward toward the apex and forming the transverse striæ, which color in gold.

6. That the nerve within the corpuscle generally retains more or less of its medullary sheath, and rarely divides in this situation.

7. The complete absence in many corpuscles of any irregularity of contour of the fibre; hence absence of any structure resembling the end-buds of Langerhaus.

8. The nerve fibre in connection with the corpuscle at the upper part can be seen to be in connection with the transverse nerve striæ which appear to come from the winding upward of the afferent nerve.

Thirty-six wood engravings accompany the paper.

THE QUESTION OF THE CONTAGION OF LEPROSY.

In a very elaborate communication (which will appear in full in the October issue of the *American Journal of the Medical Sciences*) Dr. JAMES P. WHITE, of Boston, discussed the question of the contagiousness of leprosy. He regards the term "sporadic leprosy" with great distrust, since on account of the chronic character of the disease and the want of control over patients afflicted with it, it is impossible to say that a case might not have been communicated by contagion from some other. There are an unknown number of lepers in the United States, existing as widely separated as San Francisco, New Orleans, and New York. There is also a settlement at Cape Breton in Canada. He regarded the whole subject as one worthy of the attention of the General Government and the National Board of Health, in view of the facts showing that the disease is communicable from the sick to the well, and practically incurable.

THE USE OF ERGOT IN SKIN DISEASES.

Dr. C. HEITZMAN, of New York, made some remarks on the use of ergot in different forms of skin disease. His attention had been called to it by a paper written some years ago by Dr. Le Grande Denslow. He used it locally and internally, and had found it of great service in many forms of skin disease unattended by marked structural changes except of a congestive character. In pruritus it had, in several cases, acted like a charm. In certain forms of acne, especially the large pustular form in the beard, it is very useful, and also in both forms of erythema, especially where there is dilatation or new formation of vessels. In a few cases of eczema and in psoriasis it was less effective.

He used Squibb's fluid extract in half drachm doses usually.

Dr. J. E. ATKINSON, of Baltimore, read a paper on

SYPHILODERMA PAPULOSUM CIRCINATUM, A RARE FORM OF SYPHILITIC MANIFESTATION.

He said: Although all syphilographers describe the large, flat, papular syphiloderm, together with many of its peculiarities, sufficient attention has but seldom been given to a form of eruption that always has this syphiloderm as a starting-point. This may be, with propriety, designated as the circinate papular syphiloderm. Its claim to special attention consists in its tendency to develop out of the large, flat, papular eruption by a depression in its centre and a peripheral extension of its limits. In the course of this centrifugal growth, the depressed central portion returns to the normal limits of elevation of the skin, while the raised margin forms a narrow, sharply defined, continuous, encircling boundary, whose surface becomes the seat of a rather scanty desquamation. Occasionally, when the desquamation is very copious, the epidermis may be thrown off down to the very lowest layers of the rete mucosum, and the surface of the lesion will then be moist, lightly exuding, and shortly afterward a thin, serous or brownish crust is formed, which soon dries and falls off, leaving a pigmented surface that slowly returns to its natural condition. With the unelevated centre and the narrow circumscribing border, the lesion may attain the size even of a half-dollar, and altogether loose all resemblance to a papular eruption, more nearly resembling severe tinea circinata. The eruption is sometimes accompanied by itching. The patch by irregular extension slowly becomes less circular in outline, and when several coalesce, curious figures are formed. This eruption belongs to the secondary period of syphilis, from about the third month to the eighteenth month; it affects both sexes, and is frequently located on the back, breast, head, neck, and extremities, though in mild cases a few circles upon the face may represent the entire eruption. A history of syphilitic infection will usually dispel doubt as to the nature of the eruption, the clinical characters of which resemble those of tinea circinata, psoriasis, erythema multiforme, and the late tertiary papulo-tubercular and tubercular eruptions; from the latter it differs in always starting from a single lesion, while the circular patches of late syphilis represent the peculiar tendency of the disease to group its lesions in a definite manner.

REPORT OF THE COMMITTEE ON STATISTICS.

DR. JAS. C. WHITE, Chairman of the Committee on Statistics, presented a carefully elaborated report in which the statistics of the Association for the last five years were communicated, giving a total of 58,617 cases of cutaneous disease. The report received from the different districts represented in the Society, Boston, New York, Philadelphia, Baltimore, St. Louis, and Canada, showed a total of 11,514 cases observed during the last year by competent men, among these were: eczema 3241, urticaria 347, pityriasis rubra 8 (all from New York); lichen 39, purigo 2, acne 664, impetigo 95, pemphigus 21, purpura hemorrhagica 39, purpura sim-

plex 8, syphilodermata 1544, pruritus 212, scabies 247, lepra anæsthetica 1, etc.

There being no discussion upon this report DR. WHITE then related

AN EXPERIENCE IN SKIN DISEASE.

After treating a case of warts upon the hands for some time, he was induced to try a combination of salicylic acid, cannabis Indica, and collodion, which was very successful. He had used it several times since with equally good results. The proportions were about ten grains of the extract of cannabis Indica, and thirty grains of the acid, to an ounce of collodion. In fifty cases he had never seen it fail; it should be applied daily for three or four days.

DR. HARDAWAY recommended electrolysis, which he uses with good results, piercing the base of the papillary growth with a needle.

A CASE OF PELLAGRA.

DR. SHERWOOD forwarded a communication to the Society detailing the clinical history of a case of *pellagra* in an Italian sailor treated at the Long Island College Hospital. The eruption was of an erythematous appearance, and came out first on the forehead and extended over the face, hands, and body, and was accompanied by suppurating cervical glands and great depression of spirits. The temperature at times went as high as 105½°. The case is still under treatment.

SEPTEMBER IST.—THIRD DAY.

The closing session was devoted to the examination of a number of microscopic preparations exhibited by Dr. C. Heitzman and by Dr. A. Robinson.

At the business session three new members were elected, Dr. H.W. Stellwagen, of Philadelphia, and Drs. P. A. Morgan and W. T. Alexander, of New York City.

The nominating committee presented its report, and the following were unanimously elected

OFFICERS FOR THE ENSUING YEAR:

President, R. W. TAYLOR, M.D., of New York.

Vice-Presidents, I. E. ATKINSON, M. D., of Baltimore, and A. R. ROBINSON, M.D., of New York.

Secretary, A. VAN HARLINGEN, M.D., of Philadelphia.

Treasurer, GEORGE H. ROHÉ, M.D., of Baltimore.

It was decided to hold the next annual meeting at *Lake George* on the Wednesday nearest the first of September and the two following days.

The Association then adjourned.

CORRESPONDENCE.

STUDIES AND EXPERIMENTS WITH SEPTICÆMIA IN THE LABORATORY AT BERLIN.

PARIS, August 18, 1882.

WHOEVER would imagine for a moment that the subject of tuberculosis, wide as it is, was the only one pursued at the mycological laboratory at Berlin, would make a very great mistake. The truth is, the discovery of the bacillus tuberculosis was only the crown and culmination—and a fitting one it was—to a long series of investigations in a very much wider field. Some of these investigations, as those connected with milzbrand, having led to the most important conclusions, are well and widely known, but there are many others, some settled, some still in prosecution, the results of which have not yet received the dissemination to which they are entitled. Some of them were published last year in great detail in the *Mittheilungen aus dem Kaiserlichen Gesundheits-Amt*, by the director Dr. Struck, a volume which every worker with micro-organisms should possess and thoroughly peruse, and some have been published in the various medical journals; but very few, if all of them, have received that degree of recognition with us, at least, which their value demands in view of the recent discoveries. I may be excused, therefore, for attempting to finish from my notes the report begun in my last of some other studies allied to, but in a sense alien from, the question of tuberculosis. It is my humble opinion that considerable time will elapse before we shall have any very important additional contributions to the subject of tuberculosis, for it appears to me that Koch has done his work about as Harvey did his before him, in such a way, that is, as not to have left very much room for subsequent disclosures. Harvey took twenty years, by the way, and Koch two, which is about the equivalent in our times, after making his discovery, before he published it at all, so that there is as little fear on the part of those few who are competent to give an opinion of any refutation of his views. It is amusing to read the comments in this direction, I may put it here in parenthesis, by the *litterateurs* in our profession, which are about as destructive to the peace of mind of the workers in the laboratory as the presence would be of a man in the street outside who was posing himself before the public and diverting them by balancing long straws across the bridge of his nose.

But neither their comments nor my criticism savor of science in the least, and I proceed with my report, in which I propose to confine myself simply to a narration of experiments which were made before my eyes, and some of which I was kindly permitted to repeat myself.

And first, of septicæmia, which ranks in practical interest only next to tuberculosis. It was contended by Darwin that this condition could be superinduced in more and more virulent form with every re-inoculation, that is, that less and less infecting material needed to be used to produce the same results by inoculating from animals successively killed. This view seemed to be in accord with, or in support of, a doctrine published by Nägeli, to the effect that bacteria could be changed from one form to another by changing their surrounding media, and was hailed with delight by the supporters of Weymuth, who maintained that the innocent bacteria found in such numbers in feces could, under certain circumstances, be endowed with such properties as to produce various diseases, as typhus or typhoid fevers. Buchner's claims, too, of the transformation of the innocent bacillus of hay into the malignant bacillus of anthrax was in accord with this view. Now the teaching of the Koch school is diametrically opposed to any such mutability. That is, it is not contended that any transformation is impossible, because, as I have said before, nothing is accepted here on mere theoretical grounds, but it is proven of these particular forms that no such change does occur, and that the erroneous conclusion is due to impurification (*verunreinigung*) in the experiment. When the proper precautions are taken in the process of sterilization to prevent the possible admixture of other micro-organisms, the introduction of one kind always produces in the same animal the same results. So far as the conclusions of Darwin are concerned, there is only one virulent result, and that is death, and this result is obtained whether there is introduced a whole drop containing the micro-organisms or only the infinitesimal fraction of a drop. Full evidence is manifested in one or two generations, and later cultivations do not increase it.

The most interesting conclusions to be drawn from the experiments in Berlin point to the fact that "septicæmia" is only a general term which includes a whole array of morbid processes, and this is very well illustrated by the injection into the subcutaneous tissue

of the so-called "*vibriones septiques*" of Pasteur. Here it has been found that these bacilli, to produce their effects, must be introduced below the whole depth of the skin, that is, by hypodermic injections, and that inoculation or surface abrasion will rarely suffice. The effect, then, is first, an œdematous infiltration of the tissue at the point of injection, and an extension of the inflammation from this point to the deeper structures. The blood of the heart, for instance, does not contain these bacilli at first, unless accidentally admitted in the examination of it, but later, some time after the death of the animal, abounds in them. Here then is a bacillus which, so far from being killed by decomposition, actually increases under it for a time, a bacillus which is entirely different from the common bacterium of decomposition. Koch has given the name of "malignant œdema" to this condition, a term which describes its character much better than septicæmia. Gaffky, one of the best of the *mitarbeiters* at the laboratory, after many futile trials, at last discovered that the inside of a cooked potato was about the best culture soil for this bacillus, which readily grows in it, and thus offers a depot whence to extract it for further experimentation.

A particle taken from a second potato, that is a second generation, introduced under the skin of guinea-pig, kills it on the next day with all the customary signs of malignant œdema. This bacillus abounds in the soil, and is derived at any time from the earth of the garden.

Thus different and highly distinct forms of microorganisms are now in the laboratory ready for use at any time, the inoculation of any of which will produce a form or variety of septicæmia. One is that of the malignant œdema just described, one is the most extremely fine bacillus, the finest of all hitherto described, which Koch worked out in his experiments with "*wundinfection*," called the "mouse septicæmia," and the third is the large oval micrococcus, called the "rabbit septicæmia;" either of these latter two being transmissible to either animal, and to many others.

After very many experiments the proper culture substance has been found for each of them, and continued generators are constantly kept on hand in the sterilized test-tubes so often mentioned. It is easy to see that these forms, at least, do not undergo any change whatever, and that when apparent changes occur, the phenomena is due to admixture of other forms, in other words, to an impurification. After hundreds of observations, with the avoidance of every possible source of error, Gaffky came to the conclusion that the "pathogenic micro-organisms, which were the subject of study, are produced only by themselves and only produce themselves."

It was only by means of the solid culture substance that pure so-called central observations could be made. A fragment is picked up from the surface of the gelatine slide from time to time and examined under the microscope, when any admixture of foreign microorganisms is seen at once. Just so soon as the introduction into an animal of a fragment of gelatine thus used as a culture substance fails to give the expected result, it is known that an impurification has nevertheless occurred, and the simplest examination by the microscope reveals the cause of the failure at once.

I have already intimated that very various kinds of culture substances are in use. What is a favorable soil for one is not necessarily a favorable soil for another micro-organism. Indeed, some varieties become sterile in certain soils and die out, and there is no knowing in any way what is the best soil except by experiment. For this extremely minute bacillus of the "mouse septicæmia," for instance, Koch tried various culture soils, and at last found that he could grow it in a composition of gelatine with the aqueous humor of the eye of the ox. But the growth was very feeble, and successive inoculations or cultivations upon new beds of the same soil uncertain. Finally, Löffler, another skilful mitarbeiter worked up a composition of infusion of meal with peptone one per ct., and common salt 0.6 per ct., the whole rendered very faintly alkaline with sodium phosphate, which was a most luxuriant culture substance for the *Mäuscher septicæmia*. It is perfectly clear and transparent, and the bacilli develop in it in colonies visible as opacities upon its surface. Generations of these bacilli have been grown in this soil now for nearly two years, and the growth is as fresh and virulent as ever. Two days before I left Berlin I took my first lesson with this bacillus. I was instructed to fix the mouse, as I have described before, in a glass jar, to draw out the tail, to clip off a few hairs at its root, to make a minute incision, a little skin pocket, and to introduce into it by means of the platinum point previously *ausgeglüht*, a minimal, scarcely perceptible, quantity of the gelatine, all of which was done, when I was informed that the mouse would die, with mathematical certainty, in from forty to seventy-two hours, and so it did in forty-eight. A mouse ill with septicæmia acts very much like a man under the same affliction.

Another experiment was to produce erysipelas in the ears of a rabbit by the introduction of this same bacillus into a skin pocket on the inner surface of one ear. The redness begins on the first day, increases on the second, with swelling and opacity to light, when the ear falls by its own weight, and makes a striking contrast with the sound ear. On the third day the erysipelas reaches the base of the ear, on the fourth it begins to invade the sound ear, subsiding already in the affected ear, and in the course of a week or ten days is followed by a distinct desquamation, just as is seen in ordinary erysipelas. But the ordinary erysipelas of man is not due to this bacillus. The cause of ordinary erysipelas is not a bacillus at all, but a micrococcus which has also been thoroughly worked out, and is handsomely pictured in the photographic tables of the "*Mittheilungen*." But I may not take up too much space with the narration of known facts, as the only excuse I have for writing so much away from the field is the fact that the sounds of the fight, if I may use so noisy a word in description of such quiet work, keeps still ringing in my ears.

Whatever I have written, anyhow, has been rather with a view to secure credence and recognition in my country for work which when published only in its results seems to many too strange to be true. There are those with us who are thoroughly prepared for these results; who have followed up the links for the last twenty years, beginning, I may say, with Villemin, from obscurity into light. To them there is nothing strange or new in all that I have said. But there are also many others who have looked upon these labors with an air of incredulity rather than credence from the start, and have, hence, not taken time to trace up the steps which gradually led to the main disclosures. To them the results are something like a shock; and it is only by acquaintance with the methods of work, with the patient, persistent—I had almost said painful—processes which have been going on for years that the results reached at last can be believed to be true. They have the right view in the opinion of the real connoisseurs over here, who look upon them as constituting the most brilliant contribution in the history of medicine since the day of the discovery of the circulation of the blood.

J. T. W.

THE GUITEAU AUTOPSY.

To the Editor of THE MEDICAL NEWS.

DEAR SIR: Advantage is taken of the publication of the reports of the microscopical examination of the brain, and of the measurements of the skull of Guiteau,

to reply to some strictures which have been made upon the official report of the autopsy.

1. The omission therefrom of the very important matter of these measurements has been regarded as inexcusable; they were not taken, however, until after the skull had been cleaned, too late to appear in the report. The greater accuracy secured in this way justified the postponement.

2. The statement in the report that "there was a slight flattened elevation of the corresponding internal surface of the calvaria," denied by some, has since been repeatedly verified.

3. It has been stated that the brain would have been found to weigh more than was reported, had the scales been more delicate. The scales used weighed to the half ounce; as far as known, no objection was made at the time to the weight as taken; had there been, there were scales of unquestionable accuracy accessible within the hour.

4. It has been objected that the section of the great bloodvessels of the thorax before the removal of the brain was the cause of the anæmia of the latter. The conclusion is a *non sequitur*.

To save time (a very important point in the Guiteau autopsy), it is the habit of some, myself among the number, to open and examine, as far as possible, the cavities of the trunk, while an assistant is doing the rather tedious work of opening the skull. Experience has shown that such a procedure is not necessarily followed by anæmia of the brain; on the contrary, congestion is often found. There are many such instances recorded in my notes.

Virchow, than whom there is no higher authority, reports, in his work on post-mortem examinations, the details of four medico-legal cases. In two of the four he examined the thorax and abdomen before opening the head. In one of these (translation by Dr. Smith, 1880, p. 99 *et seq.*), he found the dura mater copiously supplied with blood, the veins of the pia mater very large and much distended with dark blood, on section of the hemispheres the veins were much distended, and large drops of blood exuded from the cut surface; the cerebellum presented a similar appearance, the arteries at the base of the brain and sinuses at the base of the skull were full of dark blood. The adjectives are his own. In the second case (p. 103) fluid blood was found in the heart and large vessels of the thorax and neck; yet, on opening the head, fluid blood also was found in the longitudinal sinus, the pia mater showed venous networks everywhere, and the choroid plexus was congested. The hemispheres, however, were "remarkably pale." He does not explain this paleness on the theory of drainage, but (p. 115) considers it of pathological importance.

Wilks and Moxon, in their *Pathological Anatomy* (1875, p. 202), admit that though the head may be opened after the examination of the trunk cavities, the brain and membranes may be found "very full of blood," even though the person may have been dead only a short time. They add, in italics, the accepted opinion, that the fulness of the vessels of the brain is of no pathological significance whatever, so far as disease of the brain is concerned.

That in the Guiteau brain, the anæmia may have been partly due to drainage, is not denied; but such drainage probably took place, if at all, mainly during the three to four hours interval between the removal of the brain from the skull and the incision into it. In this connection, the hypostatic fulness of the vessels of the pia mater noted in the report may be recalled.

5. It has been further objected that the drainage of the brain diminished its proper weight. The highest authority in the weighing of the human brain is probably Broca. In his *Instructions Générales*, etc. (Paris, 1879, p. 18), he directs that after removing the brain it should be carefully placed upon a table for a short time so that the excess of fluids may run off. After it has been sufficiently drained (*convenablement égouttè*), it should be weighed.

It may be added that the circumstances under which the autopsy and report were made, will explain some omissions and commissions which were not *en regle*.

Truly yours,

D. S. LAMB.

ARMY MEDICAL MUSEUM, WASHINGTON,
September 5, 1882.

NEWS ITEMS.

VIENNA.

(From our Special Correspondent.)

OBSTETRICAL OPERATIVE INSTITUTE OF THE VIENNA MEDICAL FACULTY.—The creation of an operative school in obstetrics, for the exclusive benefit of Austrian practitioners of medicine, must be of great interest to all physicians.

For a long number of years, the resident physicians of the three large hospitals of Vienna have been petitioning the ministry of education for means to gain practical knowledge of obstetrics. They claimed that the colossal material was utilized by Americans, Englishmen, Russians, and foreigners generally, while native students were treated, for pecuniary reasons, with marked injustice. In 1879, a very spirited remonstrance was made, and petitions were forwarded to the Royal and Imperial Ministry of Education.

After an interval of almost three years, the ministry has established the following provisional statute:

"With the 1st September, 1882, an Obstetrical Operative Institute, in the Medical Faculty of the University of Vienna, will enter upon existence, whose provisional statutes, approved by the ministry of education, and designed for acquiring knowledge and instruction, are the following:

1. The object of the institute is the cultivation of a larger number of experienced obstetricians.

2. The conductors of the institute are the three Professors of Obstetrics in the University of Vienna.

3. Every native of the lands, represented in the Reichsrath, is entitled to entrance into the institute upon the exhibition of his acquired diploma in medicine surgery, and obstetrics.

4. The length of the course is six months; the first course begins upon September 1st, and ends upon the last day of February; the second begins with the 1st of March, and ends upon the last of August. Under exceptional circumstances, the time of work can be extended to the attendant physicians for one year.

5. In every course, according to the rule, only nine attendant physicians will be accepted. Of these, three will be appointed to each clinic. The appointment of more than four attendants to each clinic is not allowable.

6. Hospital physicians, still serving, or just going out of service, must announce their candidacy to the hospital director concerned, who will forward the applications to the college of professors. Applicants, who stood in no service-relation to a hospital, will announce their candidacy with evidence of former employment, directly to the 'Decanat.'

7. The college of professors will decide upon all appointments, yet they must prefer, before all others, the competing hospital physicians.

8. The attendant physicians will be subordinate to the professors and their proxies; will have, in the clinics, subordinate service under supervision of the professor, especially inspection; are entitled, in addition, to assist

at all operations, and according to their proficiency, will be allowed to undertake obstetric operations, in viva, under the supervision of the professors or their proxies. In order to carry this plan out, instruction, at the beginning of each course, will be given to the attendants.

9. After completion of the course, the attendant physicians, upon desire, can obtain a certificate, written by the professor, and certified by the Decanat."

The appearance of this statute has given rise to the liveliest comment in Vienna medical circles. The native physicians are delighted with their partial victory; the assistants, who have reaped a golden harvest at the hands of foreigners, chiefly Americans, are highly incensed at the prospect of loss of the large sums foreign physicians leave in their possession; the Americans, Englishmen, Germans, Russians, and Greeks, are completing their courses with regret. Notwithstanding the enormous number of births occurring yearly in the "Allgemeine Krankenhaus," numbering more than 10,000, the number of students from every section of the globe is proportionate; although the obstetrical institute is only a provisional arrangement, it would be well for men, seeking training in obstetrics and gynecology, to think well before coming to Vienna for the ensuing winter.

YELLOW FEVER.—The yellow fever news from Brownsville, Texas, during the week, has consisted of bulletins indicating the daily occurrence of from fifty to one hundred cases with comparatively few deaths. The relative mortality indicates the disease as of an exceptionally mild type, or, which is presumably the correct view, that all cases of fever, including the autumnal remittents prevalent in that locality, are included in the reports. Everything is being done by the general government, through the agency of the Marine-Hospital Service, to care for the sick and prevent the spread of the disease. Hospitals have been established by Surgeon Murray of that service, and a sanitary cordon has been drawn across the country from Laredo to Corpus Christi, to prevent the escape of fugitives from the infected district. The country is said to be low, sandy, free from timber, and easily guarded.

The invasion of Brownsville from Mexico is well established, but the origin of the disease in Pensacola appears enveloped in obscurity. During the summer several infected vessels were sent from the quarantine at this port to Ship Island Refuge Station. Two Italian barques arrived recently, each having three cases on board; but the origin of the excitement—although probably not of the disease—among the people was the occurrence of a death and two cases of sickness on board a Spanish ship, the "Saleta," on the 10th of August. The fatal case was seen by a medical man an hour or two before the patient died. The doctor was not positive in his diagnosis, but as a precautionary measure the Saleta was towed to sea within a few hours. Dr. Carrington,, in the Pensacola *Advance-Gazette*, gave the sanitary history of the Saleta showing that forty-five days had elapsed since she left an infected port, and that in the meantime she had been unloaded and fumigated. Dr. Jerome Cochran, of Alabama, made an official investigation into the condition of Pensacola, reviewed the Saleta affair, and concluded that there were no just grounds for alarm. But some days afterwards (August 28th), the City Board made formal announcement of the existence of yellow fever. This created considerable alarm in the neighboring cities. The Louisiana State Board prohibited the railway company from running trains from the infected city within the boundary of their State. Montgomery and Mobile are also stated to have quarantined against Pensacola.

When one considers the thousands who suffered by the introduction of a single case into New Orleans in 1878, the action of the Louisiana State Board is manifestly justifiable in default of provision for preventing the spread of the disease during commercial intercourse, but experience gathered since then has shown that safety may be attained without a recourse to non-intercourse. Recently when three or four cases existed in New Orleans the health authorities of Mississippi, instead of quarantining against the city, permitted free intercourse under the inspection system of the National Board of Health.

We have not heard that any call has been made on the National Board by State or local boards to assume control of the passenger and other traffic between Pensacola and its neighbors on the lines of rail, but this is no doubt because the commercial interests involved are so small as compared with those of New Orleans.

The able and energetic Health Officer of Pensacola, Dr. J. C. Whiting, took immediate steps to localize and stamp out the disease and to prevent panic. His latest telegram, dated September 3d, shows what success has so far attended his efforts: "No new cases of fever in the past two days. One death Friday. Have had in all nineteen cases and five deaths. Seven sick now, two of whom will likely die; others improving. No fever in shipping or in quarantine. Total mortality for the week, seven—five from yellow fever. No excitement and people very hopeful." We shall look with much interest for the ultimate results of the operations of the Pensacola City Board.

NATIONAL MEDICAL AND SANITARY EXHIBITION.—A convention of Commissioners appointed by the National and various State Boards of Health of the United States, together with Commissioners appointed by the American Public Health Association, will assemble at Indianapolis, Ind., on Wednesday, October 18, 1882, at 9 o'clock A.M., to take into consideration the question as to the best course to be pursued which may result in holding a National Medical and Sanitary Exhibition in the year 1883.

ADDITIONAL HONOR TO PROF. LANGENBECK.—Prof. Langenbeck has received from his government the highest attainable distinction, in being designated as Active Privy Councillor, with the prefix "Excellency." On his departure from Berlin he will receive a handsomely engrossed address on the part of the medical students.

PROF. GRAHAM BELL, the inventor of the telephone, received the honorary degree of Doctor of Medicine, at the Tercenary Celebration of the University of Würzburg.

PROFESSOR ESMARCH ON THE CASE OF PRESIDENT GARFIELD.—PROF. ESMARCH delivered a lecture on the treatment of President Garfield's wound before the Physiological Society of Kiel, in February last. This lecture he has now printed and circulated, and it is impossible that the views of a surgeon so accomplished and so worthy of expressing an opinion on such a case should not be canvassed. The facts of the case are first of all clearly and fairly stated from Dr. Bliss's own published accounts of the progress of the case and of the post-mortem examination. Prof. Esmarch's conclusions are (1) that the wound was not in itself absolutely fatal; (2) that the bullet was not the cause of the septic suppuration in the wound which led to the fatal result; (3) that the cause of the septic suppuration was introduced from without, and that as contributing directly or indirectly to this were the following

errors in the treatment—the repeated probing and examination of the wound with instruments and fingers not rendered aseptic, the failure to dress the wound aseptically, the syringing out of the wound with fluids not sufficiently antiseptic, and a failure to give a complete vent to the "bagging" pus; (4) there was no true pyæmia, but only metastatic inflammation of the parotid gland; (5) the cause of death was hemorrhage, moderate in amount, but occurring in one whose strength was undermined by septic fever, decubitus, bronchial catarrh, and hypostatic pneumonia; (6) although the splenic artery may have been injured primarily by the bullet, or by a splinter of bone, this would not have led to the formation of a false aneurism except for the establishment of putrid suppuration. In conclusion, Prof. Esmarch refers to the popular superstition that the bullet is the cause of all danger in a gunshot wound, and that to extract the bullet should be the chief aim of the surgeon. He asserts that most of the secondary dangers arise rather from the fingers of those who explore the wound, and that the American surgeons committed the error of doing too much rather than of doing too little, as they have been freely accused of at home. Finally, he surmises that if no search had been made for the ball, and the wound had been dressed aseptically, the unfortunate patient would have been alive now. Valuable as is Prof. Esmarch's opinion on such a point, we regret that this lecture has been published, at any rate so soon. It would not have lost in value by being kept back until the acrimonious discussion on the conduct of the attending surgeons had died out on the other side of the Atlantic. It is proverbially easy to be wise after the event, and it is an ungracious task to criticise adversely the conduct of men who, under very trying circumstances, were suddenly called upon to act in a grave emergency. We are willing to admit that mistakes may have been committed, but it is a case in which the golden rule is eminently applicable: "Let him that is without sin first cast a stone."—*Lancet*, August 19, 1882.

COFFEE AS A DISINFECTANT.—M. BAIBIER (*France Méd.*) finds powdered roasted coffee an excellent deodorizer and disinfectant. The coffee is simply scattered over and about the place or thing requiring disinfection. He has used it in autopsies and on bodies a stinking mass of putrefaction, also as a dressing to foul virulent ulcers.—*Canadian Journal of Medical Science*, September, 1882.

THE REST-CURE IN THE TREATMENT OF NEURASTHENIA.—In opening the discussion on the treatment of hysteria, in the medical section at the recent meeting of the British Medical Association, Dr. Playfair spoke in the highest terms of the value of the methods of treatment of this disease introduced by Dr. S. Weir Mitchell; Dr. Albutt, and other members of the association, confirmed the estimate expressed by Dr. Playfair of this method.

HEALTH IN MICHIGAN.—Reports to the State Board of Health, for the week ending August 26, 1882, indicate that diarrhœa, remittent fever, influenza, and inflammation of the bowels have considerabty increased, that neuralgia, typhoid fever, and cholera infantum have increased, and that erysipelas has decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending August 26, and since, at 15 places, scarlet fever at 8 places, measles at 8 places, and small-pox at 5 places, as follows: at Westwood, Kalkaska County (3 new cases), August 21; in Walker Township, Kent County, and Orange Township, Ionia County, August 21; at Grand Rapids (1 case, convalescent), August 28; and Sebewa Township, Ionia County (10 cases), August 29.

For the week ending August 26, the Sanitary Inspector reports 2 cases of whooping-cough among the immigrants arriving at Port Huron.

IN proposing the toast, "Prosperity of the British Medical Association," at the dinner in the recent meeting, SIR JAMES PAGET used the following happy expression, "Do not let our disputes be very noisy on the scientific side. Remember always that it is only through clear and undisturbed waters that you can see what lies at the bottom. In storms of controversy, there is nothing to be found but the billow that moves to mischief, and the foam that disappears."

THE VALUE OF ISOLATION IN OBSTETRIC HOSPITALS.—From the statistical report on the deliveries in Lariboisière Hospital, published by DR. SIREDY, we learn that in the first period where no attempt was made at separation of recently confined women suffering from various diseases from those in whom the process was normal, one out of every fifteen died. In the second period isolation of such cases brought the mortality down to one in forty-three. In the third period, in which personal disinfection and means to prevent the transmission of contagion were carried out, the puerperal mortality fell to one in fifty-six, and in simple cases one in eighty-eight. In the second year, when the antiseptic precautions reached a higher degree of perfection, the puerperal mortality was reduced to one in ninety-six, and for simple cases one in one hundred and fifty-three.—*L' Union Méd.*, August 15, 1882.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 28 TO SEPTEMBER 4, 1882.

BARROWS, CHAS. C., *Assistant Surgeon.*—Assigned to duty at Fort Grant, Arizona Territory.—*S. O. 130, Department of Arizona, August 21, 1882.*

SMITH, A. K., *Major and Surgeon.*—Granted leave of absence for one month on surgeon's certificate of disability.—*S. O. 131, Department of Arizona, August 22, 1882.*

SKINNER, J. O., *Captain and Assistant Surgeon.*—To take charge of Medical Director's Office Department of Arizona.—*S. O. 131, Department of Arizona, August 22, 1882.*

EGAN, P. R., *Assistant Surgeon.*—Assigned to duty at Fort Bowie, Arizona Territory.—*S. O. 134, Department of Arizona, August 25, 1882.*

WAKEMAN, W. J., *First Lieutenant and Assistant Surgeon.*—Now at Omaha, Nebraska, to report to the Commanding Officer Fort D. A. Russell, Wyoming, for duty.—*S. O. 88, Department of the Platte, August 25, 1882.*

HUBBARD, V. B., *Major and Surgeon.*—Assigned to duty at Fort Wingate, N. M.—*S. O. 172, Department of Missouri, August 28, 1882.*

BROWN, J. B., *Lieutenant-Colonel and Surgeon.*—Granted leave of absence for six months on surgeon's certificate of disability.—*S. O. 200, A. G. O., August 29, 1882.*

Corrigendum.—In our issue of August 19, page 201, 2d column, 7th line, *for* "This view of the possibility and transmissibilty of the puerperal fever poison," *read* "This view of the portability and transmissibility of the puerperal fever poison."

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

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